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District Science Leadership CoP Meeting

Provided by RCOE STEM

Wednesday, September 18, 2024, 9:00 am - 3:00 pm

Location: Naval Surface Warfare Center, Corona

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District Science Leadership CoP Meeting Agenda

All Sciences ~ All Students

September 18, 2024

WiFi Portal:
ADD INFO

Agenda

Advancing Equity and Access in Science Education:
Leveraging our Community of Practice to Support NGSS Implementation strategies for all students via pre-determined Key Behaviors.

Facilitators: Yamileth Shimojyo and Cheryl Frye

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RCOE STEM/ Science Leadership

Facilitators

and

Support Staff

Yamileth Shimojyo
STEM Administrator
RCOE

Cheryl Frye
STEM Administrator
RCOE

Kelley Ambriz
Administrator's Secretary
RCOE

Michelle Sanchez
Administrator's Secretary
RCOE

Kianny Dominguez Ponce
Instructional services Intern
RCOE

To access information: [District Science Leader's Community of Practice (DSL CoP) | Riverside County Office of Education (rcoe.us)]

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District Science Leadership CoP Meeting Agenda

Source: Bilingual Coordinators Network, Information Meeting Day 3, August 22, 2024

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Our Why

Three core beliefs guide the Science Team's work toward equity-driven opportunities for science professional learning and our broader vision:

- All students are capable of excelling in science
- All educators are capable of fully serving students
- The best professional learning shifts mindsets and practices, and supports educators, partners and students to thrive

*In alignment with the Statewide Science convenings

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DSL Community of Practice Goals 24-25

- **Goal 1** - Use of ***Powerful Task Design*** Tools toward continuous improvement for science instruction, K-12 in Riverside County
- **Goal 2** - Build leadership capacity of our CoP members
- **Goal 3** - Regional advocacy efforts toward the inclusion of science instruction, TK-6
- **Goal 4** - Partner with various STEM entities in our region to gain knowledge about industries, businesses and colleges that provide services to TK-12 moving our students toward College and Career Preparedness

*In alignment with the Instructional Leader's Network, ILN, RCOE

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DSL Community of Practice Plan 24-25

- **September 18, 2024**: Define and characterize, "Cognitive Engagement" inclusive of rigor and personal response.
- **November 13, 2024**: Practice the Walking to Learn protocol live in classrooms during the morning.
- **Friday, February 5, 2025**: Analyze student work using the Protocol for Analyzing Student Work. Teams are encouraged to bring student work from current learning tasks.

  Friday, April 23, 2025: Focus on designing for cognitive engagement to meet the rigor of our standards, practicing the Protocol for Designing to the Depth of the Standard.

*In alignment with the Instructional Leader's Network, ILN, RCOE

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District Science Leadership CoP Meeting Agenda

District Science Leadership CoP Meeting Agenda

NGSS Implementation via Vital Behaviors | All Sciences ~ All Students

Wednesday, September 18, 2024, 9:00 am - 3:00 pm

Location: Naval Surface Warfare Center, Corona | 1999 Fourth Street, Norco, CA 92860

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District Science Leadership CoP Meeting

Our Host Today:

Naval Surface Warfare Center

THANK YOU TO OUR HOSTS!

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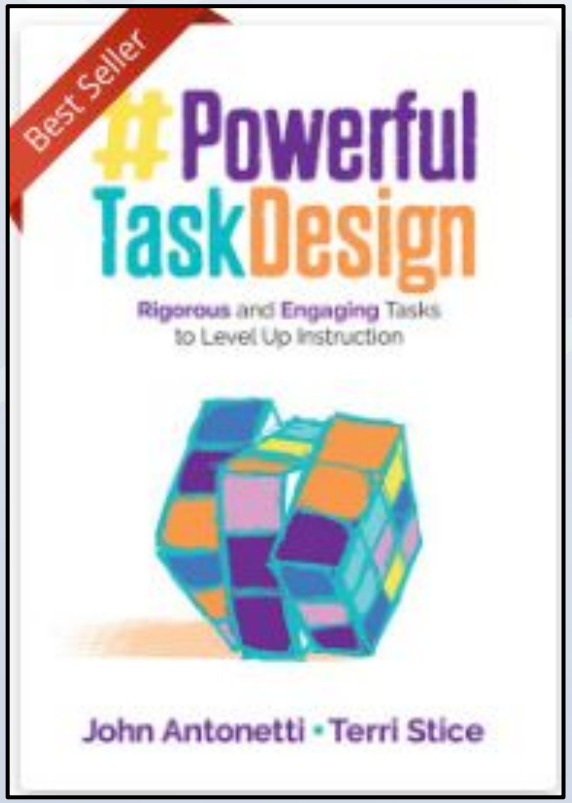
Lunch

Lunch Conversation:

- What are your current implementation successes?
- What are your current implementation challenges?

Instructional Leaders Network (ILN) alignment with DSL



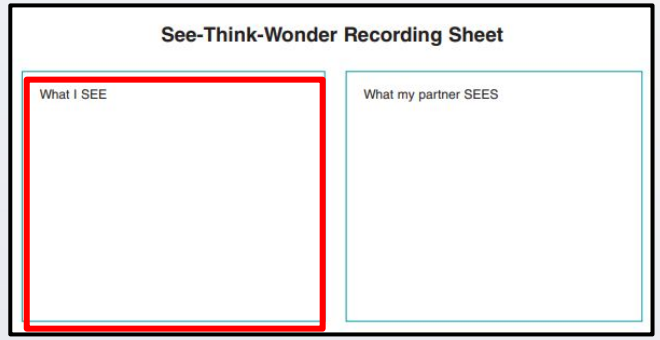
Engagement

Rigor

Collaboration

You can't be engaged in someone else's work; you can only be entertained by it.
-Antonetti

Analyzing Learning With the Powerful Task Rubric



Task #1a

- I am going to show you an interesting photograph.
- Individually, write down as many things as you can see when looking at the photo.
- Remember, do not jump to conclusions and do not think too much yet, just record what you see.
- When you share what you see, the rest of us should be able to see the same thing and should be able to point to where you saw it.

Analyzing Learning With the Powerful Task Rubric

The Powerful Task Rubric

The "Rigor Divide"

	Power Component	*1*	*2*	*3*	*4*
Cognitive Demand	Bloom – Revised Taxonomy *Examples*	Recall Name the steps	Understand Follow the steps	Apply/Analyze Infer with text support	Evaluate/Create Argue, defend, or justify
	Antonetti/Garver/Stice – Meaning	Repeat accepted meaning	Restate or reproduce accepted meaning	Making meaning: Find patterns Find use for patterns	Compare patterns Add/combine/ignore patterns
	Webb – DOK (Assessment)	Recall	Skill/Concept	Strategic thinking	Extended thinking
	Stein/Smith – Mathematics	Memorization	Procedures without connections	Procedures with connections	Making sense
Connected Learning (Tech)	Antonetti/Stice	Retrieve Copy & paste	Click here, click here, click . . . Prescriptive Learning Accessible Learning	Control- Interests power learning Question, share, contribute, Link, provide feedback	Produce, create Experiment, Design
*Academic Strategies**	Similarities and Differences	List facts about A and B	Parallel facts about A and B	Compare or contrast by trait	
	Summarizing/Note-making	Copy	Restate	Personalize or make unique decisions about content	
	Nonlinguistic Representation	Copy other given forms	Place into other forms	Create a new representation	
	Generating/Testing Hypotheses	Copy	Restate "known" pattern	Identify and extend patterns	

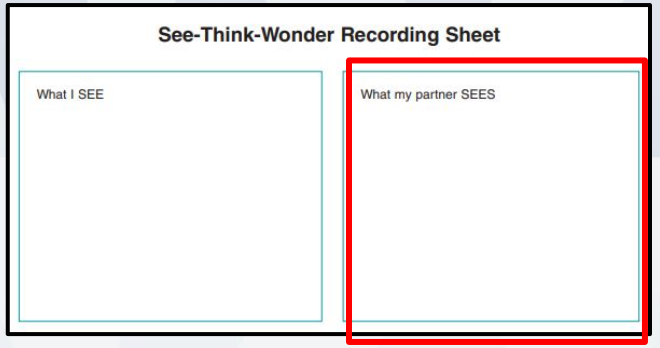
Read through the Powerful Task Rubric

Where is this task placed on the rubric?

Analyzing Learning With the Powerful Task Rubric

Task #1b

- Work in pairs and take turns telling something you saw or noticed.
- If your partners says something you did not originally see, point to what they said in the photo to make sure it is visible and that you can see it as well.
- Remind your partners if needed, that we want to postpone conclusions or hypotheses. We are just saying what we see.



Analyzing Learning With the Powerful Task Rubric

The Powerful Task Rubric

The "Rigor Divide"

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Read through the Powerful Task Rubric

Where is this task placed on the rubric?

Analyzing Learning With the Powerful Task Rubric

Task #2

- Now it is think time. Write down the hypotheses, conclusions or thoughts you have about what you see. You will have 3 minutes.

- When you share your ideas with your partner, make sure you point to the part of the picture that gave you or triggered that idea. In other words, where is the visual evidence for your inference or the basis for your conclusion.

Analyzing Learning With the Powerful Task Rubric

The Powerful Task Rubric

The "Rigor Divide"

	Power Component	*1*	*2*	*3*	*4*
Cognitive Demand	Bloom – Revised Taxonomy *Examples*	Recall Name the steps	Understand Follow the steps	Apply/Analyze Infer with text support	Evaluate/Create Argue, defend, or justify
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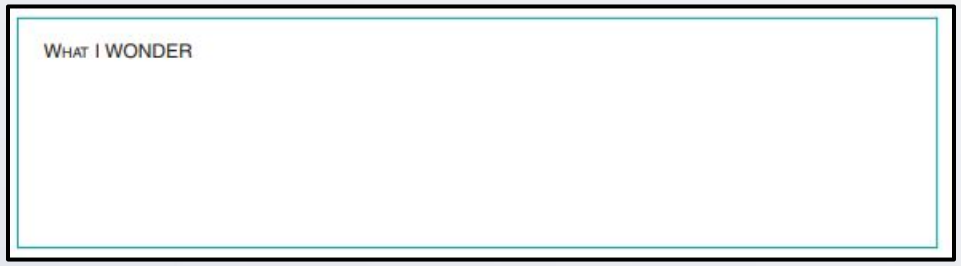
Read through the Powerful Task Rubric

Where is this task placed on the rubric?

Analyzing Learning With the Powerful Task Rubric



Task #3

- What do you wonder?
- What do you want to know about this creature? Make a list of questions in the box labelled “What I Wonder.”
- Share your questions

Analyzing Learning With the Powerful Task Rubric

The Powerful Task Rubric

The "Rigor Divide"

	Power Component	*1*	*2*	*3*	*4*
Cognitive Demand	Bloom – Revised Taxonomy *Examples*	Recall Name the steps	Understand Follow the steps	Apply/Analyze Infer with text support	Evaluate/Create Argue, defend, or justify
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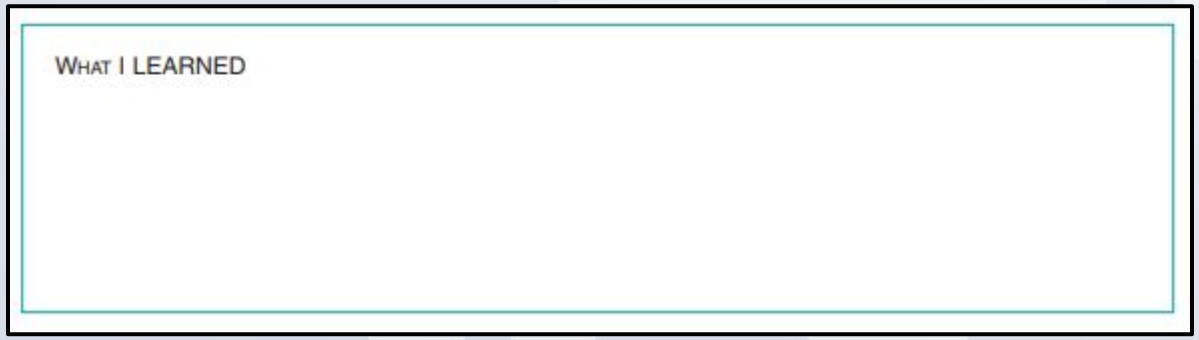
Read through the Powerful Task Rubric

Where is this task placed on the rubric?

Analyzing Learning With the Powerful Task Rubric

Task #4

- How can we find the answers to these questions?
- Record what you learn. (10 minutes)



Analyzing Learning With the Powerful Task Rubric

Task #4

- What is the most interesting thing you learned about the mantis shrimp?

Analyzing Learning With the Powerful Task Rubric

Task #4

- “The most interesting thing I learned is that I would never want to put one in an aquarium.”

Analyzing Learning With the Powerful Task Rubric

The Powerful Task Rubric

The "Rigor Divide"

	Power Component	*1*	*2*	*3*	*4*
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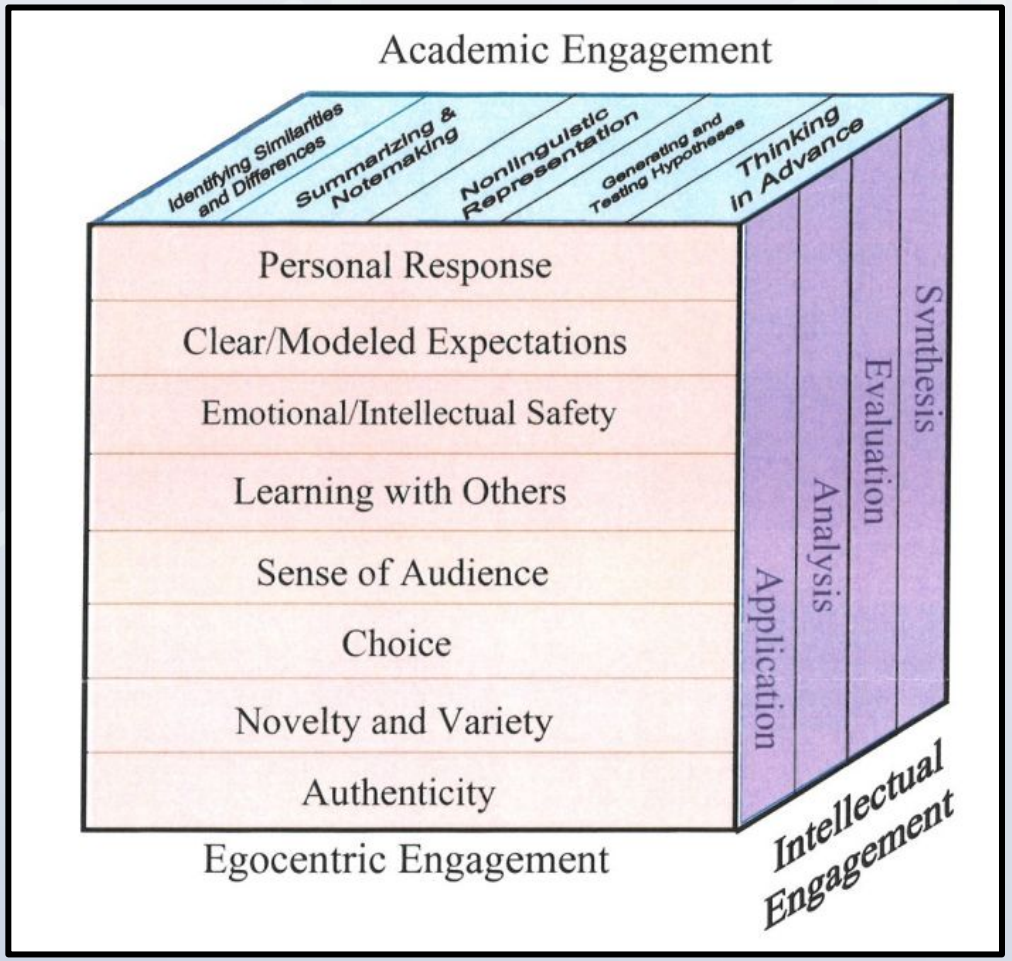
Read through the Powerful Task Rubric

Where is this task placed on the rubric?

Analyzing Learning With the Engagement Cube



A quality task designer does not look at engagement in isolation; rather, she looks at all components of the task (engaging qualities, strategies, and cognition), because together they make a more powerful design for learning.

- Antonetti pg. 71

What engagement strategies were utilized in today's task?

The Engagement Cube™ and the Powerful Task Rubric for Designing Student Work™ are the foundation of John Antonetti's work within schools. They can be found in three books on instructional best practices and task design:

Writing as a Measure and Model of Thinking (Flying Monkeys Press, 2008).
Available at www.colleaguesoncall.com

17,000 Classroom Visits Can't Be Wrong: Strategies that Engage Students, Promote Active Learning, and Boost Achievement (ASCD, 2015)

#PowerfulTaskDesign: Rigorous and Engaging Tasks to Level Up Instruction (Corwin Press, 2018)

Reflections

How will analyzing task design for rigor and engagement guide your work?

Analyzing Learning With the Powerful Task Rubric

Outcomes:

- To experience as learners the progression of a series of content tasks as cognition deepens and engagement and strategy increase.

- To analyze the relationships between (and interdependence of) the three design components to increase the rigor of a task.

Vital Behavior Commitments to Accelerate Implementation

[Google Folder]

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Elaborate: STEM Ecosystem

Offerings in Support of High Quality STEM/Science Instruction

CLICK HERE

Elaborate: STEM Ecosystem

In Alignment with Statewide NGSS Efforts

CAL-MSCS SCIENCE CORE BELIEFS
All students are capable of excelling in science.

All educators are capable of fully serving students.

The best professional learning shifts mindsets and practices, and supports educators, partners, and students to thrive.

CAL-MSCS Science
Professional Learning
Scope & Sequence 2024/25

Science Leadership Academy with the Exploratorium

Application Required *due Sept. 15 (limited capacity)*

This no-cost series for teacher leaders, TOSAs, and other professional learning providers familiar with the NGSS will provide resources and experiences to develop science education leadership capacity and impact, and allow participants to engage with a statewide network of support and practice. Anyone interested is welcome to **apply**, but capacity is limited. The series includes the below; see the **flyer** for details:

- one half-day, virtual kick off session (October 16, 2024)
- a two-day, in-person institute at the Exploratorium (January 30-3, 2025)
- virtual, monthly learning communities to support implementation (year-long)

Administrators Science Support Network with the Lawrence Hall of Science

Interest Form *(flexible involvement opportunities and capacity)*

This free **virtual series** will provide information and support for administrators at the site, district, and county level on implementing and sustaining high quality science teaching and learning. Our first session **on September 27th at 10:30am** will address the question: *What is NGSS, and how can I support implementation, teaching, and learning in my system?* Additional connection and support opportunities will be offered throughout the year to participants. Please complete the **interest form** to receive information and registration links, and share the opportunity with your networks.

In-Person Science COP & CASE Learning Track: November 2024

Registration Info *(for local implementation team representatives from the 58 COEs)*

The innaugural convening (registration required) of the CAL-MSCS Science Community of Practice will take place in Sacramento in partnership with the California Science Educators Association (CASE) annual conference. On Thursday November 7, a full day of SCOP programming will deep dive into ways to activate inclusive science learning in California, offer breakout sessions aligned to the core beliefs and priorities of CAL-MSCS Science, support teams to plan and network, and provide immersive science experiences. Programming will continue throughout the CASE conference with CAL-MSCS tracked sessions, and we'll close on Sunday November 10 with a powerful keynote from Dr. Christopher Emdin.

CAL-MSCS Science
Professional Learning
Scope & Sequence 2024/25

CAL-MSCS SCIENCE PRIORITIES
Building Educator & Leader Capacity in Science

Strengthening Connections between Families, Educators & Community Partners

Supporting Science Educator Retention

Creating Cross-Content Collaboration Opportunities

Culturally Responsive Teaching & The Brain : Virtual Book Study

Registration Coming Soon *(flexible involvement opportunities and capacity)*

To support teams to use the magic of science to strengthen authentic connections between families, educators, students, and partners, November SCOP participants will receive a copy of *Culturally Responsive Teaching and The Brain* by Zaretta Hammond. A breakout session will connect core principles from the book to asset-based science instruction and relationship building, and a guided book study will launch in January 2025 to continue this work. The book study will require registration, but be open to all.

Cross Content Collaboration Professional Learning Prototype

Multidisciplinary teams of COE, district, school and classroom leaders, along with field experts, are prototyping a meaningful-context/phenomena-based professional learning structure with the goal of elevating cross-content connection and MSCS integration. At each in-person SCOP convening, participants will have opportunities to learn about and workshop the emergent materials and resources from three prototypes which will occur in San Diego and Fresno (fall 2024) and San Joaquin (spring 2025). All final materials and resources will be shared via CAL-MSCS and the NGSS Collaborative in service of statewide dissemination and use.

Upper Elementary Science Professional Learning with CA NGSS Collaborative

CAL-MSCS Science will develop science professional learning modules for elementary teachers along with facilitation guides for professional learning providers. Once vetted, all materials will be distributed for use statewide through CAL-MSCS and the NGSS Collaborative. SCOP participants will have opportunities to engage with these materials during the spring 2025 in-person convening.

In-Person Science COP: May 2025

Registration Info Forthcoming *(May 19-20, 2025)*

The spring in-person SCOP convening (registration required) will take place in San Diego, with immersive science learning experiences, field trips to nearby science class-rooms, sessions led by local implementation teams from across the state, culminating presentations, and more.

CAL-MSCS Science will also publish a quarterly newsletter and facilitate ***Trending Tuesday*** sessions throughout the year.

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Thank You!

See you at our next meeting!

DSL-CoP 2024-2025 SURVEY

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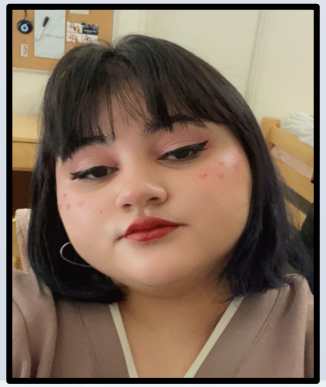
Thank You!

Yamileth Shimojyo
STEM Administrator

Cheryl Frye
STEM Administrator

Kelley Ambriz
Administrator's Secretary



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