1. Start Up: Introductions, Desired Outcomes, Participant Guidelines

2. Breakout #1: Current Practice +/Δ

3. Criteria and Process to Select Curriculum Resources

4. Resource Evaluation Tools

5. Planning and Coherence

6. Breakout #2: Make a Plan

7. Close: Resources, +/Δ

INTRODUCTIONS

Synchronous virtual sessions, Asynchronous virtual sessions (spring 2026), Face to Face Session (June 2026). All professional learning supported by funds through the Illinois State Board of Education.

IL SCIENCE STEERING COMMITTEE

Meagan Budke, ISBE

Anji Garza, PD & Ed Service Director, ROE 47

Heather Galbreath, 6th Grade Science Teacher Galesburg, IL

Brian Gibbs, Educator, Bradley School District 61

Sarah Meador, Director of ROE Services, ROE 8

Dawn Novak, Professional Learning Architect, Northwestern

Nate Nugent

Kristin Rademaker, Professional Learning Specialist, NSTA

Misty Richmond, Middle School Science Teacher, CPS

Richard Stokes, University of Illinois – Springfield

Nicole Vick

You! Breakout Participant, Speaker

Purpose & Desired Outcomes

Purpose

To deepen your understanding of the Illinois Science Standards, build your capacity to teach science, and support greater student success.

Desired Outcome

By the end of this meeting we will have:

- An understanding of the process for resource evaluation so that we can lead our school when needed

- A list of tools for resource evaluation

- A plan to strengthen my school's overall K–12 science program.

Participant Guidelines

Cameras on if possible

Participate though chat, hands up feature, and breakout sessions

Resist the temptation to multitask

Take care of your own needs

Breakout 1

Think about your school's use of high quality science curriculum and resources.

What's going well?
•

What barriers are we facing?
•

Small group discussion – 10 min.
Share out in larger group – 5 min

Group 1 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- IQWST
- There are more HQIM available (OpenSciEd)

What barriers are we facing?

- Onboarding of curriculum
- Textbooks are comfortable
  - Many branded to be NGSS-aligned, but are not
- Mystery Science is not enough
- Time
- Vertical alignment- working on it!

Group 2 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- K-5 use of Mystery Science is very engaging for students
- AP classes at the HS level—variety and success, pockets of great NGSS-aligned instruction
- PhD Science from Great Minds is also used successfully
- Teacher autonomy is high at the HS level, moving back to common summatives
- Things to learn, too, hard to be in all the classes to know what's actually going on
- Open Sci Ed has a lot of great material that's b

What barriers are we facing?

- Are we meeting the rigor required?
- Are teachers using the materials?
- Do we have strong plans to choose curricular materials together—more than just textbook adoption?
- Struggles with time in the elementary classrooms
- Dual language materials available in Science

Group 3 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- Confidence in Elevate Science Courses; Earth, Life, Physics/Chemistry
- On board with NGSS Standards
- Incorporating more Inquiry Based Learning (mindshift) – Everyone is trying a couple times each quarter
- Literacy includes interdisciplinary science topics
- STEMScopes – it's ok
- CER in grades 6-8

What barriers are we facing?

- Need more spiraling
- Need to know how to use the NGSS Standards
- Trying to improve conversations on how to choose the curriculum
- Time in K-5!!!
- Struggle with graphs, charts, etc. on ACT – need to look at technical readings
-

Group 4 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- Mystery Science is accessible in Elementary
- HMH Science Dimensions working for K-5
- IQWST materials for middle school with resources available (teacher guides, lab set up explanations)
- McGraw Hill Inspire
- Upper grades are applying curricular resources more quickly

What barriers are we facing?

- Not enough time in the day allotted
- Alternating SS/Sci
- Demand on teacher is cumbersome- time to prep materials, etc. and adaptations needed to get up to date
- Need more PD to get a deeper understanding or make connections with other content

Group 5 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- Recent curriculum adoption was a "big upgrade" for rigor and depth (elementary)
- Piloting resource K-8 – moving in right direction, 5 E's, ISA type assessment practice, changes in instructional practice
- Adopted OpenSciEd – consistent for MS
- Dedicated STEAM teacher
- MSI partnership helps districts with action planning for science ed, community outreach, and teacher PL

What barriers are we facing?

- Lack of consistency in MS (one example)
- K-5: **Time** to dedicate to science (focus is reading and math)
- How to integrate into literacy?
- Where does science fit in?
- MS: "kids can't DO science" – stuck in traditional lecture approach
- Teacher made curriculum

Group 6 – Think about your school's use of high quality science curriculum and resources.

What's going well?

- Curriculum is being reviewed
- Mystery Science
- Open SciEd
- 6-8 doing ok

What barriers are we facing?

- Time
- Affordable good professional development
- Need more understanding of NGSS

Group 7 - Think about your school's use of high quality science curriculum and resources.

What's going well?

- Adopted STEMscopes K-5 and integrate science with literacy
  - Piloting a new literacy series
- New resource-TCI (lots of resources to support multilingual learners)
- Strong team-department
- Science revamp (excitement in the district)
- K-8 coherence across the grades with the primary resource (STEMscopes)
- Leveraging CER as a way of thinking across all content

What barriers are we facing?

- ***Time** and lack of integration (literacy is the priority)
- Lack of interest in teaching using the primary resource, STEMscopes
- Primary resources-outdated, not as familiar with the resource as the coordinator (new to the role)

Anji Garza (15 min)

Criteria & Processes to Evaluate & Select Curricular Resources

Systems!

- Schedule - minutes for science instruction
- Professional Learning
- Resources
- Articulation & alignment
- Onboarding new teachers
- Mentoring & Induction
- Assessment Systems

- Mindset
- Values
- Common Language, even across disciplines (e.g. CER)

Curriculum

- The *plan* for learning

- What students are expected to learn, in what order, and to what depth

- Includes goals, standards, priority standards, scope & sequence, assessments, and instructional expectations

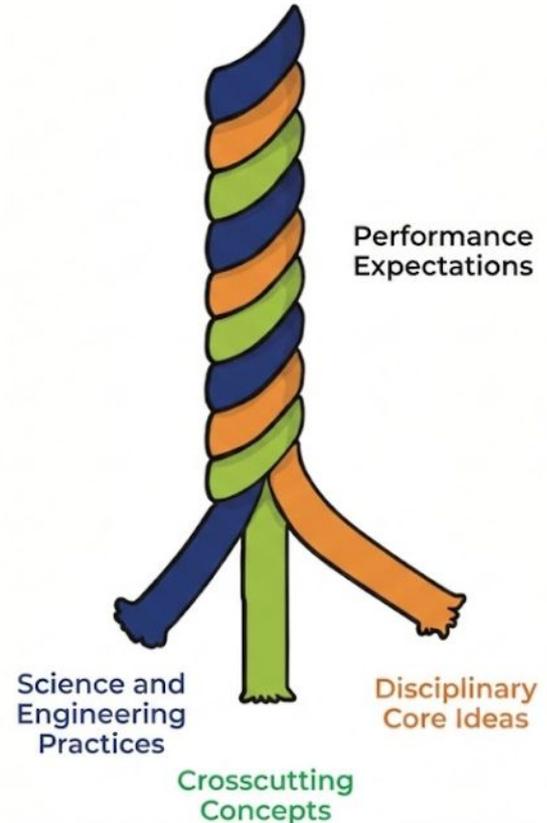- Answers: **What should be taught and learned?**

Curricular Resource

- The *tools* used to carry out the curriculum

- Textbooks, lesson plans, worksheets, digital platforms, labs, videos, readings, etc.

- Can be swapped, supplemented, or updated without changing the curriculum itself

- Answers: **What materials help teach it?**

What is a NGSS-Aligned Curricular Resource?

- **Three-Dimensional Learning (3D):** The curriculum should "braid" the three dimensions together rather than treating them as isolated components.
- **Phenomenon-Based Instruction:** Lessons should start with a real-world, puzzling phenomenon that students aim to explain or solve, driving inquiry.
- **Student-Centered Scientific Practices:** Instead of just reading about science, students must be actively engaging in practices like modeling, data analysis, and constructing arguments from evidence.

Performance Expectations

Science and Engineering Practices

Disciplinary Core Ideas

Crosscutting Concepts

What is a NGSS-Aligned Curricular Resource?

- **EQuIP Rubric Alignment:** High-quality materials often have high ratings on the [EQuIP rubric](#), which ensures the materials truly reflect NGSS design.
- **Coherence and Progression:** Learning should build over time, with concepts connecting across disciplines (Crosscutting Concepts) and advancing in complexity across grade levels.
- **Equity and Access:** Resources should provide differentiated instruction to engage all learners equally.
- Embedded Assessment: Evaluations should measure performance (what students can do) rather than just recall (what they know).

Performance Expectations

Science and Engineering Practices

Disciplinary Core Ideas

Crosscutting Concepts
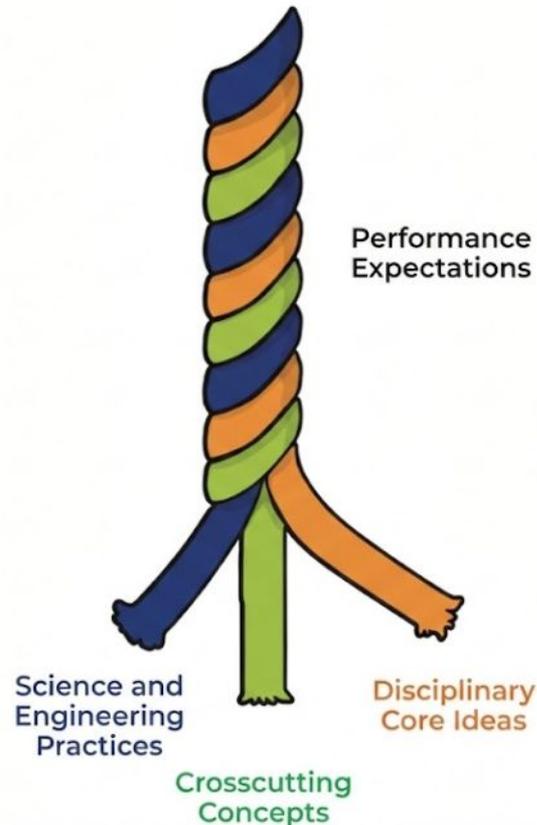
Red Flags

- **Fact-Only Focus:** Avoid materials that prioritize "knowing" facts or "vocabulary quizzes" over "doing" science. High-quality resources should focus on Performance Expectations—what students can *do* with their knowledge.
- **"Illustrative" Phenomena:** In low-quality curriculum, a phenomenon (like a volcano or a solar eclipse) is used only as an example after the teacher has already explained the concept. Authentic resources use phenomena as the **driving mechanism** that creates student questions and inquiry from the start.
- **Lack of "Three-Dimensional" Learning:** If a resource only covers content (Disciplinary Core Ideas) but ignores the Science and Engineering Practices (e.g., developing models, arguing from evidence), it is not truly aligned with modern standards like the Next Generation Science Standards (NGSS). Students should NOT just be reading about the science.

Red Flags

- **Pseudo-Scientific or Outdated Claims:** Be wary of resources that include "textbook errors" or outdated models.
- **One-Size-Fits-All Approach:** Avoid materials that lack support for diverse learners, such as English language learners or students with different reading levels. Poor resources often fail to provide differentiation strategies or culturally relevant content.
- **Inconsistent Assessment:** Look out for "multiple-choice only" tests that don't match the learning objectives or fail to measure critical thinking, problem-solving skills, and hands on nature of the NGSS.
- **Cookbook Approach:** Asks students to engage in labs or other hand on science to prove what the text or the teacher has already told them to be true. Investigations are overly scaffolded, directed, and do not promote productive struggle.

Sample Guide for Evaluating Current Resources

Click Here

Establishing Priorities for Curricular Resource Adoption

- What do we value about science learning in our educational community?
- Co-Created
- Based on research, training and shared experiences
- Builds common language and non-negotiables

Examples:

- *Features storyline approach for instructional units and lessons.*
- *Students are doing the science*
- *K-8 resource*
- *Professional learning is available to support implementation*
- *Cost must fall between XXX and XXX*

Sample Protocol for Resource Adoption

Sample Guide for Curricular Resource Adoption

Click Here

Resource Evaluation Tools

The Right Tool for the Job

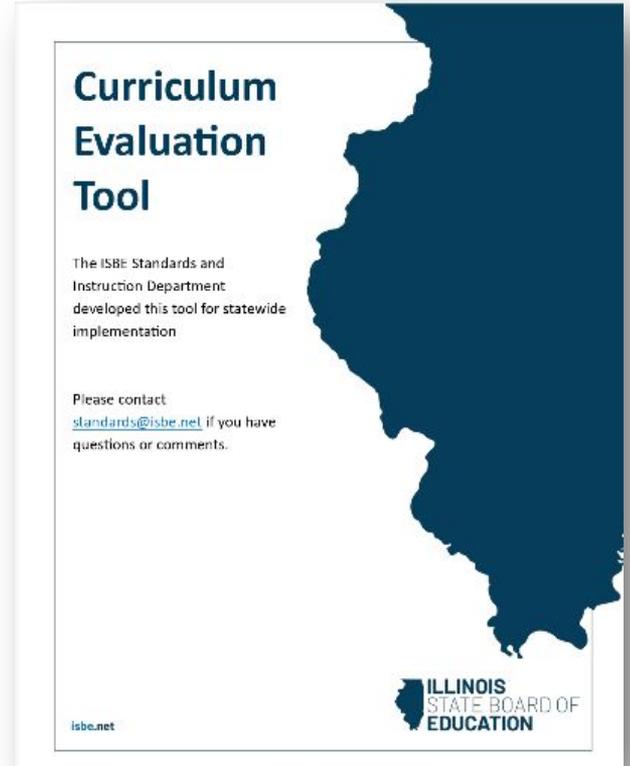| Purpose	Tool	Best Use
Strategic Readiness Can we?	NGSS District Implementation Indicators	Use this to assess if the district has the budget, PD plan, and vision before shopping
Compliance Check Should we?	ISBE Curriculum Evaluation Tool	A systems-level check to ensure alignment with Illinois Learning Standards
Quick Check What do we have?	NGSS Lesson Screener	A faster, informal tool to "spot check" lessons or pilot materials without intensive EQuIP evaluation
Quick Filter What's out there?	EdReports	Use this to cut a list of vendors down to 3 finalists
Quality Control How good are the pieces?	EQuIP	Use EQuIP to check specific units
Broad Audit How good is the whole thing?	PEEC	Use PEEC to verify the full year's curriculum coherence.
Process Map How do we do it?	NextGen TIME	Use this to guide the team to plan for implementation, not just selection

NGSS District Implementation Indicators

- Evaluates the system, not the curriculum

- Criteria for Evaluation
  - **Foundational Strategies** – Infrastructure and access
  - **Essential Strategies –** Logistics and support
  - **Results -** Student learning and engagement
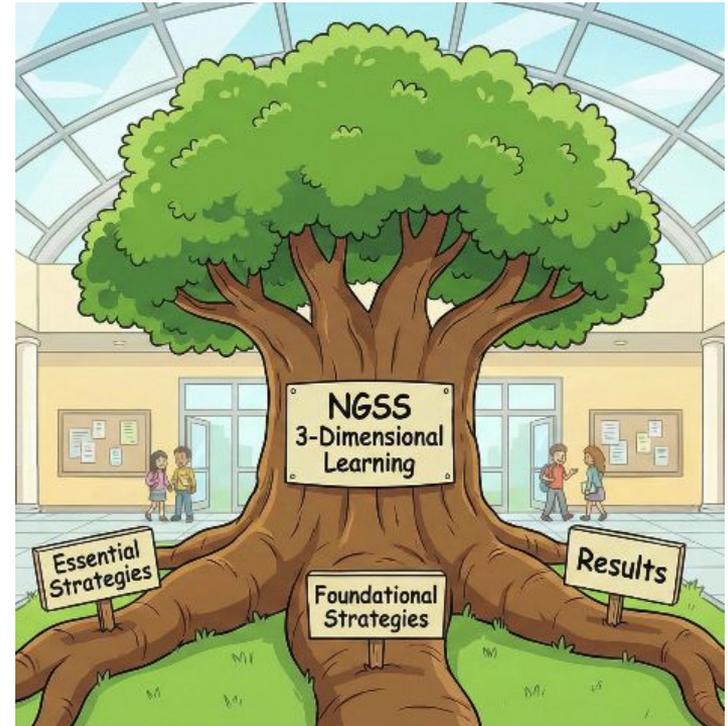
ISBE Curriculum Evaluation Tool

- Evaluates the system and curriculum
- Three Components
  - **Curriculum:** Is it developmentally appropriate and does it represent diverse perspectives?
  - **Assessment:** Do the assessments have clear benchmarks that actually match the complexity of the standards?
  - **Implementation:** Do we have the support for teachers, and safety and accessibility protocols to actually run it?

Curriculum Evaluation Tool

The ISBE Standards and Instruction Department developed this tool for statewide implementation

Please contact standards@isbe.net if you have questions or comments.

isbe.net

ILLINOIS STATE BOARD OF EDUCATION

NGSS Lesson Screener

- Intended for informal reviews

- For quick evaluation of lessons that extends over several class periods or days

- Uses a form for teachers to evaluate their existing materials

- Evaluates lessons based on:
    - Explaining Phenomena/Designing Solutions:
    - Three-Dimensional Learning
    - Integrating the Three Dimensions
    - Relevance and Authenticity
    - Student Ideas
    - Building on Prior Knowledge

NextGen Science

WestEd

EdReports

- Consumer Reports of instructional materials
- Provides free, public reviews of K-12 instructional materials in ELA, Math, and Science
- Reviews are conducted by educator teams, not publishers
- Uses a "Gateway" system of elimination
  - Gateway 1 - Alignment
  - Gateway 2 - Coherence
  - Gateway 3 - Usability

GATEWAY 1

● **Does Not Meet Expectations**

GRADES
6-8

REPORT RELEASED
12/10/2019

GATEWAY 2

NE **Not Eligible**

GATEWAY 3

NE **Not Eligible**

EdReports

- K-8 Reviews: Comprehensive check to see if the program covers every single performance expectation for that grade

- High School Reviews: Claims-Based Model that looks at what the publisher claims to cover; they do not penalize a Biology for not teaching Physics

Note on review tool versions ⌃

See the top of the page to confirm the review tool version used to create this report.

- Our current review tools are version 2.0 and later. **Learn more** ›
- Reports conducted using earlier review tools (v1.0 and v1.5) contain valuable insights but may not fully align with our current instructional priorities. **Read our guide to using earlier reports and review tools**

EdReports

- Only covers full year-long curriculums rather than single units

- Provides a snapshot in time

- Several publishers have publicly disputed their low ratings, arguing that it has a very narrow interpretation of NGSS

- Some are concerned about curriculum bloat

EQuIP Rubric for Science
Educators Evaluating the Quality of Instructional Products

- Evaluates how well lessons and units are designed for the NGSS

- Designed to give specific feedback to developers/teachers to improve the material

- Evaluates based:
  - NGSS 3D Design
  - NGSS Instructional Supports
  - Monitoring NGSS Student Progress.

equip
Educators Evaluating
Quality Instructional Products

EQuIP Rubric for Science
Educators Evaluating the Quality of Instructional Products

- EQuIP review of a single unit can take a team several days to weeks

- Reviewers need significant training to use the rubric effectively; it is not intuitive for beginners

- It evaluates units, not full year-long programs

- Coherence across a year is hard to gauge

PEEC
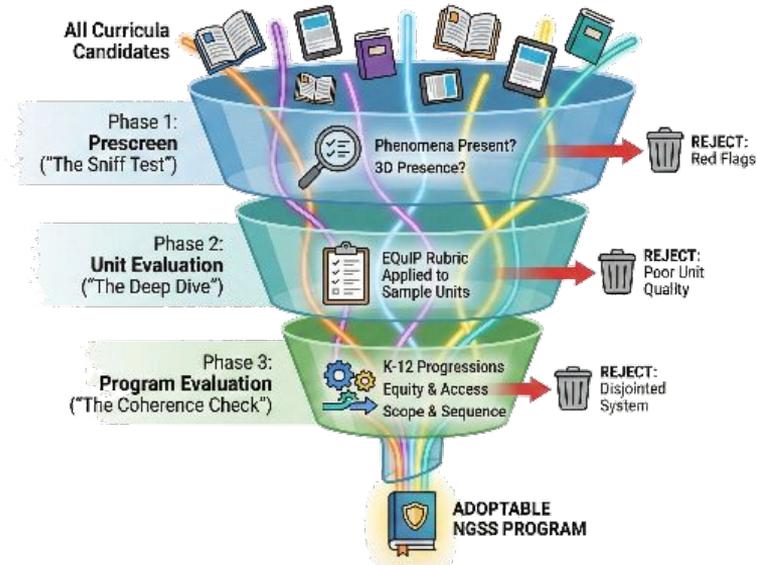## Primary Evaluation of Essential Criteria

- Checks if the curriculum works coherently across a school year

- Evaluates based on five criteria
  - Making Sense of Phenomena & Designing Solutions
  - Three-Dimensional Learning
  - Building K–12 Progressions
  - Alignment with ELA & Math
  - All Standards, All Students

PEEC
Primary Evaluation of Essential Criteria

- **Evaluations are done in three phases**

  - **Phase 1: Prescreen**
    - Quickly eliminates programs that are clearly not ready

  - **Phase 2: Unit Evaluation**
    - Verifies the quality of the actual lessons
    -

  - **Phase 3: Program-Level Evaluation**
    - Checks for coherence and completeness.

PEEC
Primary Evaluation of Essential Criteria

- Demands a high level of coherence that few commercial product achieve

- Process is so heavy on paperwork and procedure that teams can get "rubric fatigue"

- You cannot use PEEC if you don't understand EQuIP

- Has been "retired"

NextGen TIME
Toolkit for Instructional Materials Evaluation

- Suite of tools and a processes for curriculum *selection* and *implementation*, not just evaluation

- Forces districts to plan for professional development, budget, and rollout during the selection process

- Specific protocols to help teams reach a consensus

NextGen TIME

BSCS
SCIENCE LEARNING

NextGen TIME
Toolkit for Instructional Materials Evaluation

- **Five Phases**
  - **Prepare** to evaluate, select and implement instructional materials
  - **Prescreen** to reduce the number of potential programs to 3-5 based on key criteria
  - **Paperscreen** using evidence and rubrics to evaluation the design of material.
  - **Pilot** testing of the top programs to collect data from programs under consideration
  - **Plan** to support and monitor the implementation of the program selected

PREPARE
Prepare to evaluate, select, and implement instructional materials

PRESCREEN
Use a small number of criteria to focus on the most relevant materials

PAPERSCREEN
Use evidence & rubrics to evaluate design of materials

PILOT
Use evidence & rubrics to evaluate materials as used in the classroom

PLAN
Plan for broad & effective implemention of materials

NextGen TIME

Toolkit for Instructional Materials Evaluation

- Requires a massive commitment of time and staff (often a multi-day or multi-week process)

- Difficult to implement without hiring additional trained facilitator

- May be too much for the needs of some district

The Right Tool for the Job

Purpose	Tool	Best Use
Strategic Readiness Can we?	NGSS District Implementation Indicators	Use this to assess if the district has the budget, PD plan, and vision before shopping
Compliance Check Should we?	ISBE Curriculum Evaluation Tool	A systems-level check to ensure alignment with Illinois Learning Standards
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Broad Audit How good is the whole thing?	PEEC	Use PEEC to verify the full year's curriculum coherence.
Process Map How do we do it?	NextGen TIME	Use this to guide the team to plan for implementation, not just selection

What comes next?

Three Things to Remember

- You do not need to be the science expert
- Your role is to create space, protect focus, and provide cover
- Fewer priorities = better implementation

Which phase are you in?

- Access to high quality curriculum and resources

- Initial training on new resources

- Implementation of resources

We have one! What comes next?

- **Set the Direction:** Collaboratively agree on 2-3 instructional non-negotiables

- **Protect the Conditions:** Regular collaborative planning time, science scheduling, singular initiative

- **Learn Alongside Teachers:** Participate in the PD, experience a lesson as a learner, ask questions about student thinking not teacher performance

- **Support Practice Not Perfection:** Walkthroughs focused on 2-3 non-negotiables, non-evaluative feedback, normalize struggle

- **Keep PLCs Focused:** Center conversations on what students are doing, saying, and producing

- **Pause and Adjust:** Quarterly Check of successes, barriers, needs

Think about your school's use of high quality science curriculum and resources.

Plan	Needs and Questions
●	● We will respond in the slides after the session!

Small group discussion - 10 min.
~~Share out in larger group - 5 min~~

Group 1 – What is your plan for next steps, and what support do you need?

Next Steps:

- Visiting PLCs to listen to successes, barriers, and needs
- Dig into the evaluation tools and pull the best from them
- Refine criteria tools used

Support Needs and Questions:

-

Group 2 – What is your plan for next steps, and what support do you need?

Next Steps:

- Review tools shared and create a process for committee to review
- Evaluation of here educators are first and current reality; determine team by team; use instructional coaches to support this process
- Review the tools and determine which ones to use

Support Needs and Questions:

- Examples of process other district's might be using as a resource
- Supports for material review committee – how to get them PL before they start this process os relieving and recommending materials for adoption

Group 3 – What is your plan for next steps, and what support do you need?

Next Steps:

- Try some of the tools – will give more data points to give an accurate assessment of the resource
- Deeper dive will give PLC a better idea of resources to use
- Vertical alignment – trying to get a bridge to middle school

Support Needs and Questions:

- More difficult to get teachers to plan labs for their lower ability students

Group 4 - What is your plan for next steps, and what support do you need?

Next Steps:

- Use the Lesson Screener with all teachers
- Non-negotiables
- Schedules for K-5 to focus more on science
- Middle School discussions surrounding current contract updates (time and material considerations)
- 3D in NGSS
- Coherence among teams using small steps

Support Needs and Questions:

- EdReports doesn't seem to include Mystery Science. Is there a separate report I might use to spur discussion/compare to our National Geographic materials?

Group 5 - What is your plan for next steps, and what support do you need?

Next Steps:

- Revisit tools that were shared
  - Use to support current curriculum adoption/exploration
- ACTUALLY schedule PD that has been a thought
- Capitalize on momentum from pilot training

Support Needs and Questions:

-

Group 6 – What is your plan for next steps, and what support do you need?

Next Steps:

- Use the rubric resources to look at curriculum

Support Needs and Questions:

-

Group 7 – What is your plan for next steps, and what support do you need?

Next Steps:

- Finding a curricular resource-using the tools we were given today to look at different things we could use
- Sharing these resources with the powers that be :)

Support Needs and Questions:

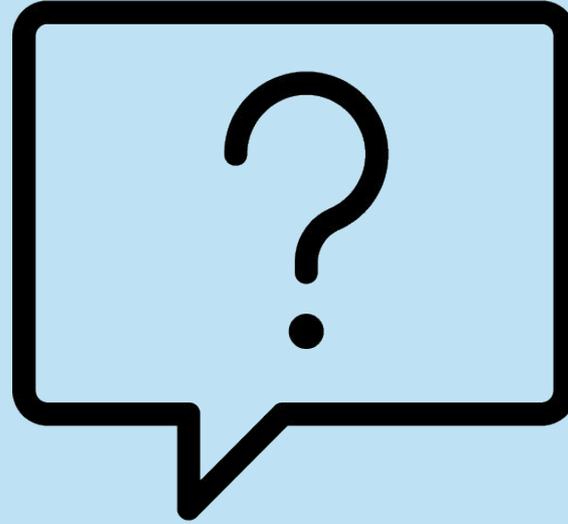- More information about particular primary resources: STEMscopes, Mystery Science

Close

Meeting Evaluation

PLUS

-

DELTA

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