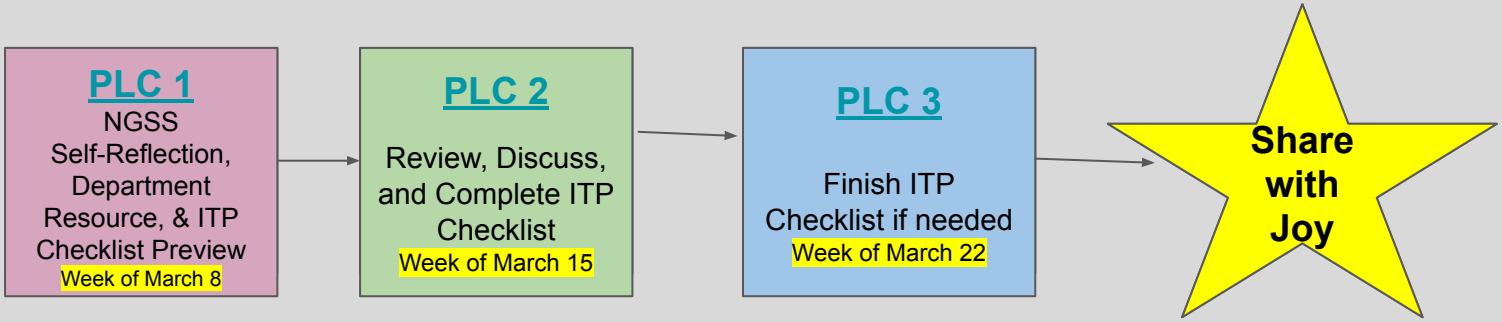
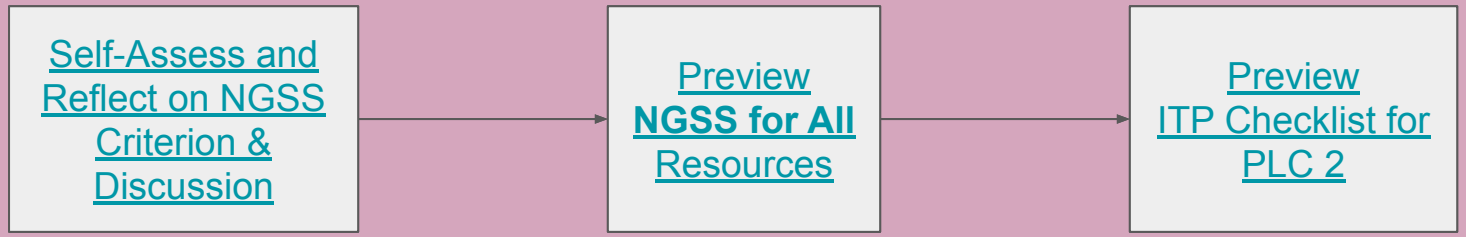
Curriculum Renewal Process

Middle School Science



Today in PLC we will...



Criterion 1: A Focus on Three-Dimensional Learning

How well does the science teaching promote three-dimensional learning?
How apparent are each of the three dimensions in the teacher's approach?

Indicators: Teaching includes
(1) using the three dimensions to make sense of phenomena or design solutions to problems,
(2) ensuring that the three dimensions are easily identifiable,
(3) developing the dimensions over a course of a series of lessons that coherently build together, and
(4) the three dimensions working together in an authentic (non-superficial) way, essential to carrying out the lesson or series of lessons.

Level 1	Level 2	Level 3	Level 4
The teaching emphasizes only one or two of the three dimensions in lesson goals. The dimensions included in the lesson are only partially used for building toward understanding. The teaching does not support students in making sense of phenomena or designing solutions to problems. There is no emphasis on the doing of science.	There is potential for the teaching to involve the three dimensions, but the dimensions do not build over time, and/or the integration of the dimensions is not observed. The teaching does not support students in making sense of phenomena or designing solutions to problems using the three dimensions in an authentic way. There is little emphasis on the doing of science.	The teaching involves a focus on the three dimensions, and they are each stated as goals, but they do not build together toward understanding. The science and engineering practices are used with core ideas and CCC in a superficial manner. A focus on phenomena or design solutions to problems is present but is not the driver of what is occurring. Doing science is becoming more prominent as part of the classroom culture.	The teaching includes each of the three dimensions; by the three dimensions working together and building over time, the teaching supports the doing of science. The science and engineering practices are used with core ideas and CCC so students can make sense of phenomena or design solutions to problems.

Ratings:

Strengths:

Suggestions for improvement:

Criterion 4: Emphasis on Student Thinking and Reflection

Does the teaching focus on students' current understanding and ideas, use a variety of formative assessment to support student learning, deliver opportunities for differentiation and co-construction of learning, provide scaffolding of challenging tasks and/or extend learning when appropriate?

Indicators: Teaching purposely
(1) solicits and builds on current and prior science ideas from the class and past experiences,
(2) includes time for student metacognitive reflection,
(3) engages students in multimodal experiences,
(4) offers collaborative groups to participate in tasks or solve problems,
(5) builds on students' world views and epistemologies, and
(6) requires students to build genuine knowledge products that demonstrate deep understanding.

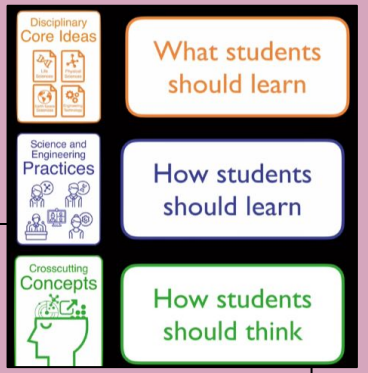
Level 1	**Level 2**	**Level 3**	**Level 4**
The teaching is not organized around students' ideas or strength. There is no clear and sound rationale present for the teaching decisions or differentiation. No assessment is included or only a summative assessment is issued. No links are made to prior knowledge.	The teaching attempts to focus on students' ideas and strengths. It is not always clear if the differentiation is based on a rationale in terms of students' current understanding and student learning outcomes. Assessment does not inform teaching moves. Few links are made to prior knowledge.	Most of the teaching accesses and builds on students' strengths and ideas. However, some of the aspects of differentiation, social construction of learning, and student-centered instruction are noticeably missing. Some links are made to prior knowledge. Building on assessment data is present but vague or unvaried.	The teaching is student centered and well-reasoned and accesses and builds on ideas that demonstrate deep understanding. Teachers and students explicitly co-construct shared understanding, and they may build artifacts that serve as genuine products for authentic audiences. Evidence of building on varied methods of assessment is present. Links are frequently made to students' prior ideas.

Ratings:

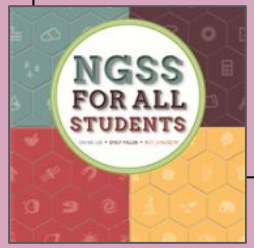
Strengths:

Suggestions for improvement:

NGSS For All Students



- Resource for curriculum review
  - Ch 2: SEPs for Equity
  - Ch 14: Reflecting on Instruction to Promote Equity and Alignment to the NGSS
  - ACCESSIBILITY→ "All Standards, All Students."
    - Economically disadvantaged
    - Racial & ethnic groups
    - Disabilities
    - English language learners
    - Girls
    - Alternative education
    - Gifted and talented



- Other resources
  - What is the NGSS? & Why is it important?

MS-ESS1-1.	Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.]

  - Scientific Phenomena and Sensemaking
    - *What are students trying to figure out and how are they doing it?*
    - Observable event in the real world
    - Spark curiosity and wonder
    - Address the standards
    - Can be investigated

Preview ITP Checklist

Priority Standards

- Looking at NGSS, what key instructional practices are needed? What picture for classroom learning is described?
- Do the priority standards of each course adequately address crucial learning across the content area? Are there gaps? (Priority Identification Checklist)

Consider the Illinois Science Assessment Requirements/scope as a resource.

Scales

- Utilize the High Quality Scales Checklist to assess the quality of your scales.
- Are there scales that need adjustment based on teacher feedback? parent or student feedback?
- Are there any new scales needed based on changes to prioritization?
- Is there adequate learning time for students to attempt mastery of all of the established scales?

Common Assessments

- Does the content area have a common place to contribute universal and course-specific formative assessment tools?
- Are additional options or ideas needed for formative assessment as part of each scale? (Consider the Assessment Blueprint tool as an option or the development of common Look-Fors.)
- Are open-ended performance tasks that allow for demonstration of learning across each scale created for courses?

Resources

- Reflect on your priority standards and overarching competencies within your content area. What types of resources support the transference of skills to other areas and to beyond school?
- What additional resources are needed that are course specific? Think of how you currently support students who struggle with reaching proficiency? (This is a place to describe the types of resources, not specific titles or programs.
- What else are people asking for?

PLC Practices

- What common data is available for content area reflection? Consider classroom-based, common formative, summative, MAP/PSAT, PARCC, etc.
- What data are you using and does it provide any indication of success or needed change to our current prioritization, units of study, or our current resources?
- Are teachers of special populations, such as special education and EL, included as active members of course PLCs or the district committee?
- What would support growth in teaming for your department?

Technology-Enhanced Instruction/Personalization Needs

- What curriculum-based tools are still needed to support technology-enhanced learning and personalization? (examples: work plans, mastery paths in Canvas, differentiated resources, etc.)
- How are classroom activities universally designed to be accessible for diverse students? (See UDL)

Instruction

- Can I locate diverse voices, historical figures, and representations from different cultural backgrounds in my curriculum and instructional resources?
- Do the instructional practices and strategies support students of all backgrounds and allow for access to learning and student voice?

PD

- How does your department engage in professional development?
- What instructional practices are necessary to be common across your content area?
- What is your department's skill in utilizing these practices?
- What other learning needs exist?

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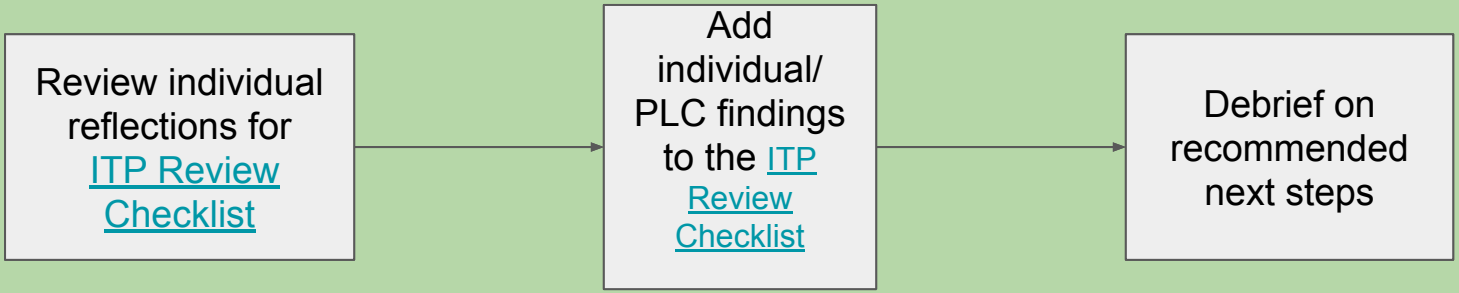

District 100 Guidelines

Curriculum Review/Resource Identification Cycle
6-8 Science: ITP Review Checklist

As District 100 continues its shift toward student-centered learning and competency-based progression, the tools and resources that support the curriculum must also shift. These shifts include allowing for:

- Identification of the guaranteed and viable learning that all students will master
- Competency-based movement through curriculum
- Technology-enhanced learning experiences
- Teacher & student access to a variety of resources
- Greater flexibility in the allocation of resources among teachers and courses
- Learning to occur flexibly within several contexts including traditional courses, short-term seminars, independent projects, internships, and learning that occurs outside of the classroom

Priority Standards Reflection from ITP Checklist

➔ Looking at **NGSS**, what **key instructional practices** are needed? What picture for classroom learning is described?

Common Assessment Reflection from ITP Checklist

- ➔ Are **additional options** or ideas needed for **formative assessment** as part of each scale? (Consider the Assessment Blueprint tool as an option or the development of common Look-Fors.)
- ➔ Are open-ended **performance tasks** that allow for demonstration of learning across each scale created for courses?

PLC Practices Reflection from ITP Checklist

- ➔ What data are you using and does it provide any **indication of success or needed change** to our current prioritization, units of study, or our current resources?
- ➔ **What would support growth in teaming** for your department?

Technology-Enhanced/Personalization Needs Reflection from ITP Checklist

➔ How are classroom activities **universally designed** to be accessible for diverse students? (See UDL)

Instruction Reflection from ITP Checklist

- ➔ Can I locate diverse voices, historical figures, and **representations from different cultural backgrounds** in my curriculum and instructional resources?
- ➔ Do the **instructional practices and strategies support students of all backgrounds** and allow for access to learning and student voice?

Resources Reflection from ITP Checklist

- ➔ Reflect on your priority standards and overarching competencies of NGSS. What types of resources **support the transference of skills to other areas and beyond school**?
- ➔ What **additional resources** are needed that are course specific? Think about how you currently support **students who struggle** with reaching proficiency?(This is a place to describe the types of resources, not specific titles or programs.)
- ➔ **What else are people asking for?**

PD Reflection from ITP Checklist

- How does your department engage in **professional development**?
- What **instructional practices** are necessary to be common across your content area?
- What is your department's **skill in utilizing these practices**?
- What **other learning needs** exist?

Next Steps...

Let the discussion today soak in...

- What are our “highest need” priorities?
  - Adult learning needs?

Curriculum Renewal Process

Where Are We Now?