

Edits:

NASA links I would like to incorporate are linked below - since my goal is to make the NYSSLS more accessible I wanted to provide a range of SEPs and CCC's to provide my colleagues with examples of how they could modify their already existing lessons. CCC's are used in all disciplines of science since that will be the attendance of those listening to the PD.

Cross-Cutting Concepts (CCC's)

- 1) Patterns *and* Cause and Effect:
<https://mydasdata.larc.nasa.gov/interactive-models/human-impact-and-creation-urban-heat-islands>
- 2) Cause and Effect:
<https://mydasdata.larc.nasa.gov/mini-lessonactivity/identifying-changes-land-use>
- 3) Scale, Proportion and Quantity:
<https://mydasdata.larc.nasa.gov/mini-lessonactivity/carbon-dioxide-production-and-sequestration>
- 4) Systems and Systems Models:
<https://mydasdata.larc.nasa.gov/mini-lessonactivity/systems-and-system-models-observing-carbon-dioxide-atmosphere>
- 5) Stability and Change:
<https://mydasdata.larc.nasa.gov/mini-lessonactivity/stability-and-change-changes-sea-ice>

1. What is the title of your leadership project?

Making Lessons 3D: Easy Shifts for NYSSLS-Aligned Instruction

2. Which option did you choose and why did you select the option/topic?

I selected 'option 1 - implement a professional development experience,' to better hone my public speaking skills within my department. Although I do not struggle speaking in front of students, speaking in front of my peers has continuously been a challenge for me. In my district, each department member is required to present throughout the year (across department meetings) and I always am extremely nervous to present. I am hoping this presentation provides me with the confidence to speak aloud to my peers.

As for the topic, we have shifted to the NYSSLS standards in science and some teachers have fully embraced the change; while others are dreading the shift. I am hopeful I can provide some insight on how to make small daily changes to lessons for students which will better improve their learning and understanding of the content and increase their interest in the subject matter.

Ideally of course, this will better prepare them with PoG skills for the state examinations and for their next set of schooling or the workforce.

3. Who is your proposed audience? Which teachers will you serve with your PD and activities? What grades, subjects, and how many students do they teach?

My proposed audience is my science department of 13 members - ranging in age from 30 to 65 and teaching across all scientific disciplines: physics, chemistry, biology, and earth science. These teachers have varying years of teaching experience and almost all are tenured. These teachers teach grades 9 through 12 and various levels (ICT through AP). Each teacher ranges from 65-90 students (depending on the specific class). There will be no Special Education teachers or TAs in attendance.

4. How will your project demonstrate integration of STEM in the classroom?

This project will demonstrate integration of STEM in the classroom as one of the professional developments' goals is for colleagues to develop a learning target and a task that is 3-dimensional and requires students to use science practices/cross-cutting-concepts to explain phenomena.

5. What outcomes or expectations do you hope to see for your educators?

Since colleagues are at different levels of integration of NYSSLS, I have developed three learning goals for professional development.

1. Identify the DCI, SEP, and CCC in a lesson or activity they already use. *This will continue to familiarize colleagues with the new standards and how to read them.*
2. Use a 3-dimensional planning tool to revise one lesson to be more aligned with the NYSSLS. *This will continue to familiarize colleagues with the new standards and help them modify lessons they already do to fit the needs of the new standards.*
3. Develop a learning target and a task that is 3-dimensional and requires students to use science practices/cross-cutting-concepts to explain phenomena.

6. How will you follow up with the teachers in attendance?

To exit, we will conclude with an exit ticket that will ask colleagues to input one change they will make this week to incorporate a more 3-dimensional approach to their lessons. I will then send out a survey (google form) asking colleagues for feedback on whether or not they implemented the change and if so, how it went. If they did not implement the change, I will ask what made them decide not to implement it (for data collection purposes). I recognize that this is not a school-mandated response and teachers may choose not to respond to the google form. The only requirement per our contract is to give mini-trainings at the department meetings - there is no follow up required.