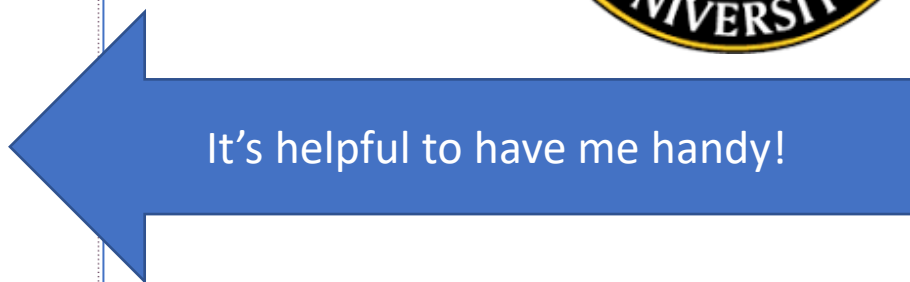


# Supervisor Debrief Conference

Stockton Teacher Education Program

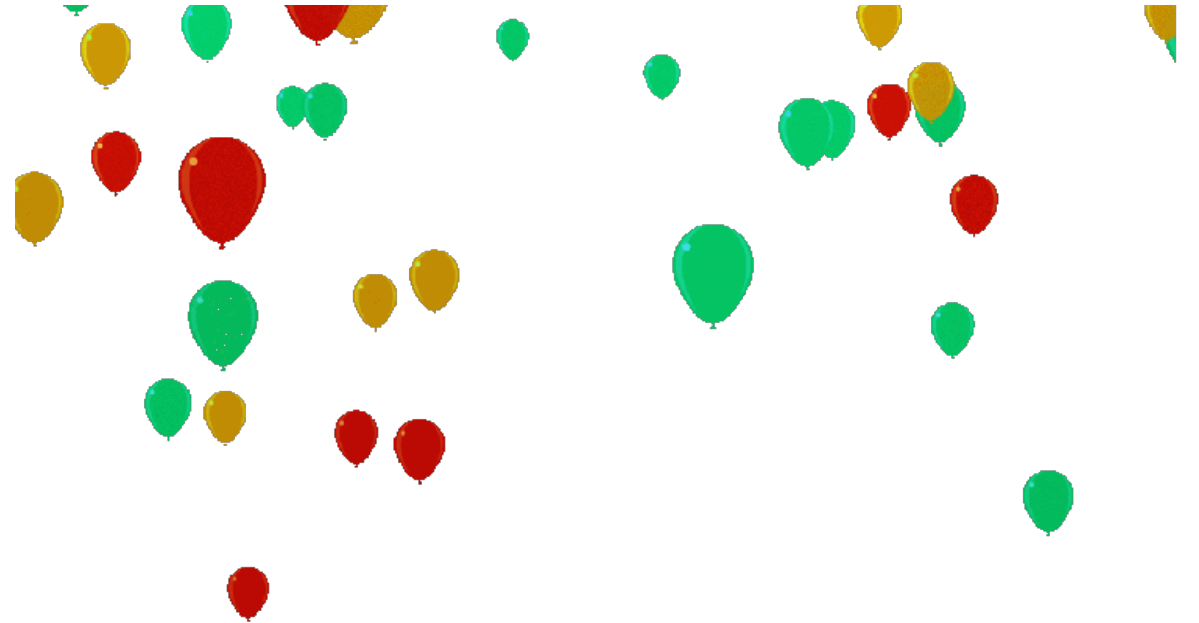
May 27-28, 2020



I'll be recording today's session for archival & training purposes.



But first...  
congratulations!  
As of Fall 2020,  
your status will  
change to *adjunct  
faculty!*



# Training schedule

## Wed- May 27<sup>th</sup>

- |             |  |
|-------------|--|
| 10-11 am    | ECE & Elementary                                       |
| 11:30-12:30 | English (including Middle School LAL) & World Language |
| 1-2 pm      | Social studies (including Middle School) & Art         |

## Thurs- May 28<sup>th</sup>

- |             |                                       |
|-------------|---------------------------------------|
| 10-11 am    | Mathematics (including Middle School) |
| 11:30-12:30 | Sciences (including Middle School)    |

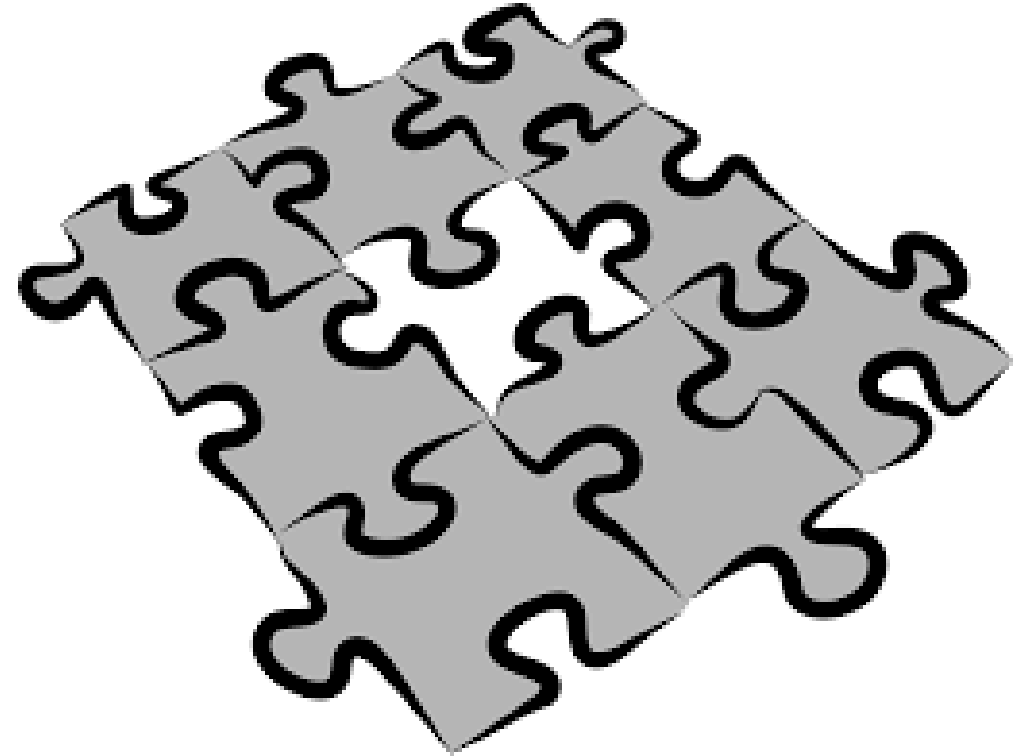


# Realizing something's missing....

- You are all well versed in evaluation.
- You are regularly trained on Danielson Framework.
- Danielson provides common language and structure for review & discussion of practice.

But....

- Danielson is designed to be general and applicable to all content areas.
- Planning and instruction is tied to the curriculum and content standards.
- Ask yourself how well you capture, in writing, a student's use of content & its application in your observations.



Meet our content specialist!

- **Math-** Mrs. Cullen, Instructor of Education, EDUC 4640 Methods of Mathematics instructor, former GEHRHSD Administrator and K-12 Mathematics Teacher



# Today's objectives

- Use the lens of content knowledge and the NJSLS to inform evaluation of candidate practices
- Accurately differentiate between levels of performance through review of evidence (artifacts, video)
- Identify actions that can be taken to inform observation and evaluation of student teaching to highlight content-specific practices

# Review of exemplar

<https://tinyurl.com/SupvTrainingMay2020>



NARRATIVE WITH LESSON  
ARTIFACTS



LINK TO THE NEW JERSEY  
STUDENT LEARNING STANDARD



VIDEO EXEMPLAR(S)

# Math Exemplar- content focus

## A. Work with radicals and integer exponents.

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,  $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$ .*
2. Use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that  $\sqrt{2}$  is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as  $3 \times 10^8$  and the population of the world as  $7 \times 10^9$ , and determine that the world population is more than 20 times larger.*
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

- **Order of Magnitude** (The *order of magnitude of a finite decimal* is the exponent in the power of 10 when that decimal is expressed in scientific notation.  
For example, the order of magnitude of 192.7 is 2, because when 192.7 is expressed in scientific notation as  $1.927 \times 10^2$ , 2 is the exponent of  $10^2$ .)
- **Scientific Notation** (The *scientific notation for a finite decimal* is the representation of that decimal as the product of a decimal  $s$  and a power of 10, where  $s$  satisfies the property that its absolute value is at least one but less than ten, or in symbolic notation,  $1 \leq |s| < 10$ .  
For example, the scientific notation for 192.7 is  $1.927 \times 10^2$ .)



# Math Exemplar

- Lesson focus- scientific notation
  - Lesson 1- meaning of scientific notation and how to read it
  - Lesson 2 & 3- perform operations with numbers written in scientific notation
    - Lesson 2- addition & subtraction
    - Lesson 3- multiplication & division

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**MATH HANDBOOK TRANSPARENCY WORKSHEET**

2

## Operations with Scientific Notation

Use with Appendix B,  
Operations with  
Scientific Notation

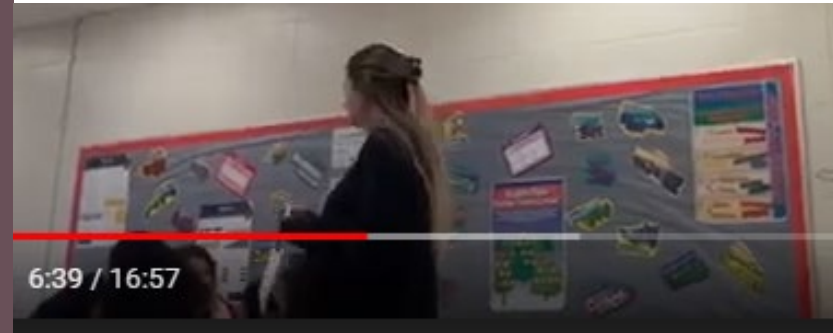
- Perform the following operations and express the answers in scientific notation.
  - $(1.2 \times 10^5) + (5.35 \times 10^6)$
  - $(6.91 \times 10^{-2}) + (2.4 \times 10^{-3})$
  - $(9.70 \times 10^6) + (8.3 \times 10^5)$

Choice Board: You must pick 3 items to do on this tick-tack-toe board, either vertically or diagonally. This paper, along with your choices completed, will be turned in on October \_\_\_\_.

<p>Approximately <math>4.7 \times 10^7</math> disposable diapers are thrown away each day in the United States. How many are thrown away each year? Show all your work and write your answer in scientific notation.</p> <p>20 points</p>	<p>20 points: Go to the website below. Print out the cards. Cut the cards out. You will notice that the standard and scientific notation are given. Sort the cards into two piles – Correct and Incorrect. Glue down the two piles onto a sheet of paper with two columns labeled Correct and Incorrect.</p> <p><a href="https://docs.google.com/file/d/0B7xtyzC7J_mFSk1QQWtadzNvQnM/edit">https://docs.google.com/file/d/0B7xtyzC7J_mFSk1QQWtadzNvQnM/edit</a></p>	<p>20 points: An apartment complex has 3 buildings. Each building has 3 apartments. There are 3 people living in each apartment, and each person pays 3 dollars per month for pool maintenance. How much does the apartment complex collect total for pool maintenance each month? Draw a picture to help you answer and show all your work.</p>
<p>30 points</p> <p>a) <math>\left(\frac{-2d^{11}f^6}{e^{18}}\right)^2 =</math>      d) <math>\frac{4.2x^4y^4}{0.6x^9y^3} =</math></p> <p>b) <math>\left(\frac{d^{11}f^{16}}{d^6f^6}\right)^3 =</math>      e) <math>\frac{y^3(3zx)^2}{9x^3} =</math></p> <p>c) <math>\frac{z^4x^2y}{zxy^2} =</math></p> <p><b>SIMPLIFY. SHOW ALL WORK.</b></p>	<p>Create a game where students have to match a number in scientific notation to a number in standard form. You must create at least 12 questions for this game. Be creative. Include an answer key.</p> <p>30 points</p>	<p>Create a graphic organizer that tells how you would solve scientific notation problems. Include how to write a number in scientific notation, how to write a number in standard form, how to add and subtract scientific notation, and how to multiply and divide scientific notation. Try to make it as user friendly as possible.</p> <p>30 points</p>
<p>Go to the website below. Print out the two worksheets. Do only the evens. Show all your work. Turn in the worksheets.</p> <p><a href="http://calbomath.weebly.com/uploads/3/7/2/4/37248227/scientific_notation_worksheet.pdf">http://calbomath.weebly.com/uploads/3/7/2/4/37248227/scientific_notation_worksheet.pdf</a></p> <p>50 points</p>	<p>Create a comic strip to outline the rules of exponents. Include what to do when you are multiplying, dividing, and power to power. Also, include what do to when you have an exponent of zero.</p> <p>The comic strip must contain:</p> <ul style="list-style-type: none"> <li>○ a minimum of 8 panels or boxes</li> <li>○ clearly drawn characters</li> <li>○ element(s) of humor, irony, drama, ...</li> </ul> <p>50 points</p>	<p>Google the distance from each planet to the Sun. Write the standard and scientific form for each planet. Create a poster to display your findings. Make it colorful and easy to understand.</p> <p>50 points</p>

# Math Exemplar

- Video excerpt- 16 minutes- Features student teacher and mentor- Starts with review of problems on interactive whiteboard with question/response between teacher and students. Teacher then has students worked independently with teacher monitoring progress. This is followed by review of steps as class with commentary from students.



## Chapter 10.7 – Adding and Subtracting in Scientific Notation

Objective: *Students will be able to relate what they know about numbers written in scientific notation with the same power of 10 and apply basic operations, such as addition and subtraction*

Method to Adding and Subtracting in Scientific Notation:

1. Identify if the two numbers have the same power of 10. If not, can you rewrite them to have the same power of 10?
2. Once written in the same power of 10, add or subtract the factors.
3. Identify if that next factor is in scientific notation. If not, rewrite it in proper scientific notation, and then perform the product of powers property to finalize your answer.

Examples:

I do	We do	You do
$(8.2 \times 10^2) + (3.41 \times 10^{-1})$	$(7.8 \times 10^{-5}) - (4.5 \times 10^{-5})$	$(3.5 \times 10^{-2}) - (6.6 \times 10^{-3})$

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Problem:**

**Show your work!**

**What are you doing?**

# Stop & chat

Take a moment to think about the content targeted for this learning segment. **Do not JUDGE it yet!**

- What content within math for grade 8 is being focused on?
- What are the prerequisite skills learners had prior to this?
- What discipline-specific practices are being used to teach the content?



<https://tinyurl.com/SupvTrainingMay2020>

# 1a Knowledge of content & pedagogy

## The elements of component 1a are:

### Knowledge of content and the structure of the discipline

*Every discipline has a dominant structure, with smaller components or strands, as well as central concepts and skills.*

### Knowledge of prerequisite relationships

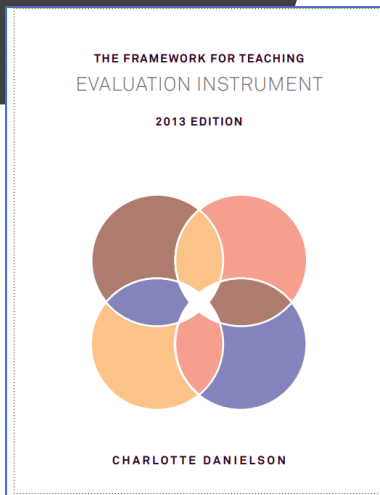
*Some disciplines—for example, mathematics—have important prerequisites; experienced teachers know what these are and how to use them in designing lessons and units.*

### Knowledge of content-related pedagogy

*Different disciplines have “signature pedagogies” that have evolved over time and been found to be most effective in teaching.*

## Indicators include:

- Lesson and unit plans that reflect important concepts in the discipline
- Lesson and unit plans that accommodate prerequisite relationships among concepts and skills
- Clear and accurate classroom explanations
- Accurate answers to students’ questions
- Feedback to students that furthers learning
- Interdisciplinary connections in plans and practice



# 1a- Knowledge of content and pedagogy

## UNSATISFACTORY • LEVEL 1

In planning and practice, the teacher makes content errors or does not correct errors made by students. The teacher displays little understanding of prerequisite knowledge important to student learning of the content. The teacher displays little or no understanding of the range of pedagogical approaches suitable to student learning of the content.

## BASIC • LEVEL 2

The teacher is familiar with the important concepts in the discipline but displays a lack of awareness of how these concepts relate to one another. The teacher indicates some awareness of prerequisite learning, although such knowledge may be inaccurate or incomplete. The teacher's plans and practice reflect a limited range of pedagogical approaches to the discipline or to the students.

## PROFICIENT • LEVEL 3

The teacher displays solid knowledge of the important concepts in the discipline and how these relate to one another. The teacher demonstrates accurate understanding of prerequisite relationships among topics. The teacher's plans and practice reflect familiarity with a wide range of effective pedagogical approaches in the subject.

# What you had to say for 1a

- **Could there a better way of teaching**, such as discovery
- The content was **only applied to a real life situation** (from what I read) **once** as an exit ticket. I am not sure from what I read / viewed, whether there was more. The lesson did **link the prior knowledge** (adding/subtracting fractions need common denominator). The approaches I saw / heard only **used one pedagogical approach**.
- Instructional **procedures were clear and purposeful**.
- Lessons were **sequential**. Lesson plans **did not reflect a wide range of pedagogical approaches**.
- In teaching and especially in planning, the teacher appears to have an **acceptable grasp of the math content** central focus relating to and usage of scientific notation. **Limited student feedback** observed during the video showed limited growth in understanding the process in converting standard notation into scientific notation.

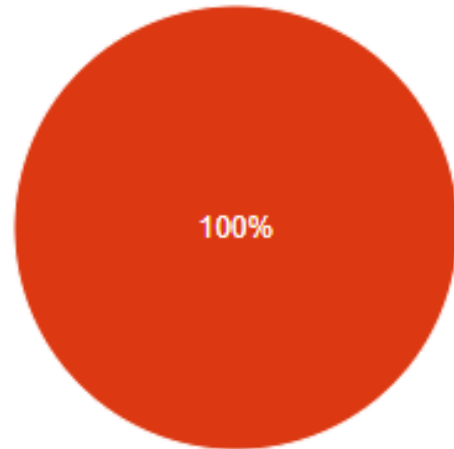
# More on 1a....

- - The **teacher has difficulty explaining** the rationale behind the principal.
  - She seem **somewhat unsure** herself
  - Practical examples are very helpful
- I thought the student teacher was familiar with the important concepts and how they relate to one another. She **was conscientious of necessary pre-requisites** in her consideration for these plans. However, I thought the **plans and video reflected a limited range of approaches** for instruction.
- In teaching and especially in planning, the teacher appears to have an **acceptable grasp** of the math content central focus relating to and usage of scientific notation. **Limited student feedback** observed during the video showed **limited growth in understanding** the process in converting standard notation into scientific notation.

# Your evaluation of 1a

Provide your rating for Domain 1, 1a, Demonstrating knowledge of content & pedagogy, based on your review of all materials.

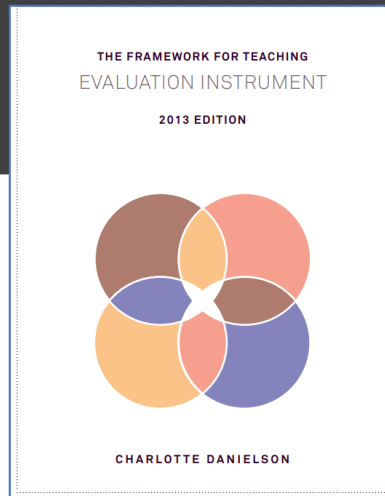
8 responses



- 3- The teacher displays solid knowledge of the important concepts in the discipline and how these relate to one another. The teacher demonstrates ac...
- 2- The teacher is familiar with the important concepts in the discipline but displays a lack of awareness of how these concepts relate to one another....
- 1- In planning and practice, the teacher makes content errors or does not correct errors made by students. The teacher...



## 3a- Communicating with students



### The elements of component 3a are:

#### Expectations for learning

*The goals for learning are communicated clearly to students. Even if the goals are not conveyed at the outset of a lesson (for example, in an inquiry science lesson), by the end of the lesson students are clear about what they have been learning.*

#### Directions for activities

*Students understand what they are expected to do during a lesson, particularly if students are working independently or with classmates, without direct teacher supervision. These directions for the lesson's activities may be provided orally, in writing, or in some combination of the two, with modeling by the teacher, if it is appropriate.*

#### Explanations of content

*Skilled teachers, when explaining concepts and strategies to students, use vivid language and imaginative analogies and metaphors, connecting explanations to students' interests and lives beyond school. The explanations are clear, with appropriate scaffolding, and, where appropriate, anticipate possible student misconceptions. These teachers invite students to be engaged intellectually and to formulate hypotheses regarding the concepts or strategies being presented.*

#### Use of oral and written language

*For many students, their teachers' use of language represents their best model of both accurate syntax and a rich vocabulary; these models enable students to emulate such language, making their own more precise and expressive. Skilled teachers seize on opportunities both to use precise, academic vocabulary and to explain their use of it.*

### Indicators include:

- Clarity of lesson purpose
- Clear directions and procedures specific to the lesson activities
- Absence of content errors and clear explanations of concepts and strategies
- Correct and imaginative use of language

# 3a- Communicating with students

## UNSATISFACTORY • LEVEL 1

The instructional purpose of the lesson is unclear to students, and the directions and procedures are confusing. The teacher's explanation of the content contains major errors and does not include any explanation of strategies students might use. The teacher's spoken or written language contains errors of grammar or syntax. The teacher's academic vocabulary is inappropriate, vague, or used incorrectly, leaving students confused.

## PROFICIENT • LEVEL 3

The instructional purpose of the lesson is clearly communicated to students, including where it is situated within broader learning; directions and procedures are explained clearly and may be modeled. The teacher's explanation of content is scaffolded, clear, and accurate and connects with students' knowledge and experience. During the explanation of content, the teacher focuses, as appropriate, on strategies students can use when working independently and invites student intellectual engagement. The teacher's spoken and written language is clear and correct and is suitable to students' ages and interests. The teacher's use of academic vocabulary is precise and serves to extend student understanding.

## BASIC • LEVEL 2

The teacher's attempt to explain the instructional purpose has only limited success, and/or directions and procedures must be clarified after initial student confusion. The teacher's explanation of the content may contain minor errors; some portions are clear, others difficult to follow. The teacher's explanation does not invite students to engage intellectually or to understand strategies they might use when working independently. The teacher's spoken language is correct but uses vocabulary that is either limited or not fully appropriate to the students' ages or backgrounds. The teacher rarely takes opportunities to explain academic vocabulary.

# What you had to say for 3a

- **Some students** had said they were **confused**. Others were **not engaged**.
- There seemed to be more than one strategy shared with students, and at times, the "adding to the exponent - subtracting from the exponent" etc. could confuse some students (in my opinion). **The words "bigger" and/or "smaller" could confuse middle school students.** (-3 is "smaller" than -2, for example) . Students sometimes see the "3" and think it is "bigger" than the "2".
- The teacher **communicated the algorithm, but not the conceptual understanding behind the algorithm.** Teacher-student interactions were friendly and demonstrated warmth and respect. Students exhibited respect for the teacher. Student interactions were generally polite and respectful.

# More on 3a....

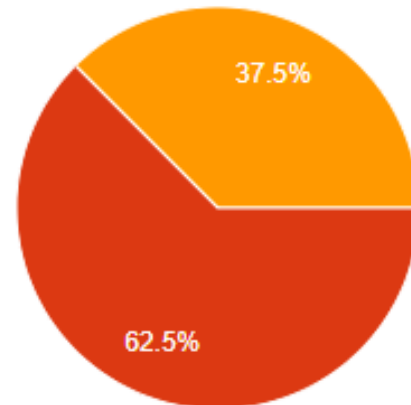
- Several students did not appear to understand procedures, and the teacher was able to **successfully answer student questions**. It appeared that the **cooperating teacher had to step in** and clarify steps on a few occasions. The teacher mentioned strategies students could use, **but when students had questions, gave the answer instead of asking student to explain** what they did.
- Communication with students in the video was **minimally effective with limited attempts at getting feedback** for understanding from the students observed. Teacher comments such as "right?" and "everyone good now?" gave limited feedback on student understanding. The cooperating teacher filled in gaps as teacher wrote on the chalk board.
- I sensed that the student teacher **thoroughly understood the concept but didn't convey that well** to the students. She communicated the steps to doing the problem but it must not have been that clear as many **students seemed confused** and had questions as they worked through the problems. She also went over the steps of the problems after the students worked on them and asked if there were questions.

# Your evaluation of 3a

Provide your rating for Domain 3, 3a, Communicating with students, based on your review of materials.



8 responses



- 3- The instructional purpose of the lesson is clearly communicated to students, including where it is situated within broader learning; directions and...
- 2- The teacher's attempt to explain the instructional purpose has only limited success, and/or directions and procedures must be clarified after initi...
- 1- The instructional purpose of the lesson is unclear to students, and the directions and procedures are confusi...

# Content Knowledge

**INTASC Standard 4**....Teachers must have a deep and flexible understanding of their content areas and be able to draw upon content knowledge as they work with learners to access information, apply knowledge in real world settings, and address meaningful issues to assure learner mastery of the content.

**New Jersey Student Learning Standards for English Language Arts**

**Grade 2**

The New Jersey Student Learning Standards define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs ready to succeed. The K–12 grade-specific standards define end-of-year expectations and a cumulative progression designed to enable students to meet college and career readiness expectations no later than the end of high school.

<https://www.state.nj.us/education/cccs/2016/ela/g02.pdf>

# Content knowledge

1- Unsatisfactory/developing	2- basic	3- proficient
<p>The teacher has minimal command of subject matter with major gaps in knowledge. NSLS are not considered in lesson planning and/or do not align with instruction planned. Teacher has little to no understanding of teaching strategies to foster student understanding in the discipline.</p>	<p>The teacher demonstrates a limited command of subject matter with gaps in knowledge. NJSLS are selected for lessons but may be misaligned or not prevalent in instruction planned. Teacher has a limited range of teaching strategies to foster student understanding of key disciplinary concepts.</p>	<p>The teacher demonstrates a solid command of subject matter. Appropriate NJSLS standards are incorporated into lessons including relevant content, consideration for prior student knowledge, planning multiple teaching strategies that foster the understanding of key disciplinary concepts.</p>

# What you had to say about content knowledge

- More techniques could have been used.
- There were **not multiple teaching strategies** used in this lesson. The "reason" for scientific notation, although written in the documents, was not seen or addressed in the lesson. This may have been completed before the clip, but I am not sure.
- The teacher **displayed a limited range of strategies**.
- I would rate this as a high X. The teacher **does understand the content** and standards are aligned to the lesson appropriately. However is **no evidence of a wide range of teaching strategies**.
- The student teacher seemed to have a **solid understanding** of the subject matter, the standards, necessary pre-requisites, and prior student knowledge. She **references how the content knowledge is applicable** to everyday life.



# More on content knowledge...

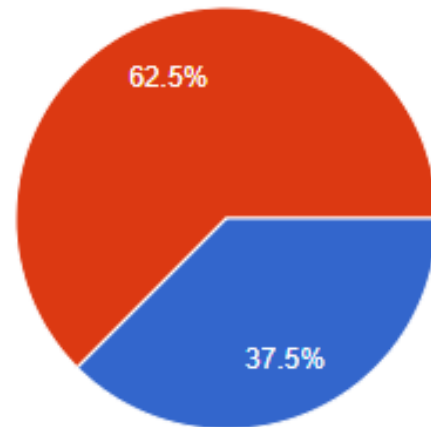
- Based on lesson plans and related instructional materials, the teacher had a **good grasp of the math content**, relating concepts to real life, and the sequencing of instruction to raise student knowledge levels on a paced basis. In observing the video, however, teacher **instructional demeanor was less than engaging** and student-teacher academic **exchanges were minimal** hindering the ability to get a clear evaluation of student progress.
- - she **understands the concepts but preparation is poor**.
  - notes and practice examples should have been better prepared.
  - her **techniques of instruction are limited**.

# Your evaluation of content knowledge

Provide your rating for content knowledge based on your review of materials. (Alignment-InTASC 4, NJSLS- <https://www.nj.gov/education/cccs/>)



8 responses



- 3- The teacher demonstrates a solid command of subject matter. Appropriate NJSLS standards are incorporated into lessons including relevant content, co...
- 2- The teacher demonstrates a limited command of subject matter with gaps in knowledge. NJSLS are selected for lessons but may be misaligned or not...
- 1- The teacher has minimal command of subject matter with major gaps in knowledge. NSLS are not considered i...

# Application of content knowledge

**InTASC Standard 5**.... Today's teachers make content knowledge accessible to learners by using multiple means of communication, including digital media and information technology. They integrate cross-disciplinary skills (e.g., critical thinking, problem solving, creativity, communication) to help learners use content to propose solutions, forge new understandings, solve problems, and imagine possibilities. Finally, teachers make content knowledge relevant to learners by connecting it to local, state, national, and global issues.

# Application of content knowledge

1- Unsatisfactory/developing	2- basic	3- proficient
<p>The teacher does not apply key concepts of the discipline within instruction in alignment to NJSLS and/or relies heavily on textbook or pre-existing curricular materials. Classroom activities lack student engagement in problem solving and/or critical thinking.</p>	<p>The teacher inconsistently applies key concepts of the discipline within instruction in alignment to NJSLS. Classroom activities and strategies engage some, but not all students in problem solving and critical thinking within the content area.</p>	<p>The teacher consistently applies key concepts of the discipline within instruction in alignment to NJSLS. Classroom activities and strategies engage students in problem solving and critical thinking within the content area.</p>

# What you had to say about application of content knowledge

- Some **students were not engaged**
- As stated above, I am **not sure if there was any "application" level** instructional strategy used.
- Instruction was **focused on rote practice** of the algorithm without critical understanding.
- The lessons **focused on a single strategy** for students to demonstrate they knew how to solve the examples.
- In application, I found the teacher **lacking in making connections** between the math topic and helping students understand the connections between scientific notation and their lives. Consequently, the **learning energy level** of students to grasp concepts **was rather low**.

# More on application of content knowledge

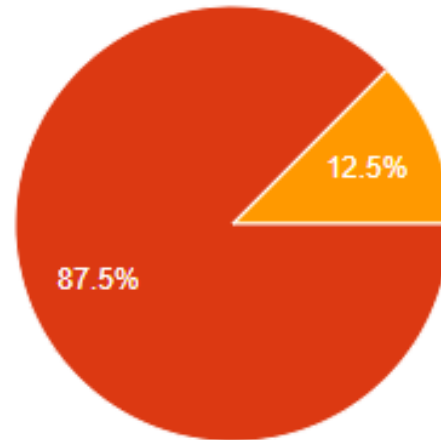
- - the teacher **needs to add instructional techniques.**
  - the teacher should **build upon the comments of the classroom teacher.**
  - strategies for effective understanding should be introduced.
- The execution of the lesson seemed **lacking some of what was planned. Students needed to be engaged** on their own to solve the problems. Students might have been more engaged with fewer questions if they were working with a partner to solve the problems. Since the video is just a slice of the three lessons, it is difficult to know if she applied more of what she planned.

# Your evaluation of application of content knowledge

Provide your rating for the application of content knowledge based on your review of materials. (Alignment- InTASC 5, NJSLS- <https://www.nj.gov/education/cccs/>)

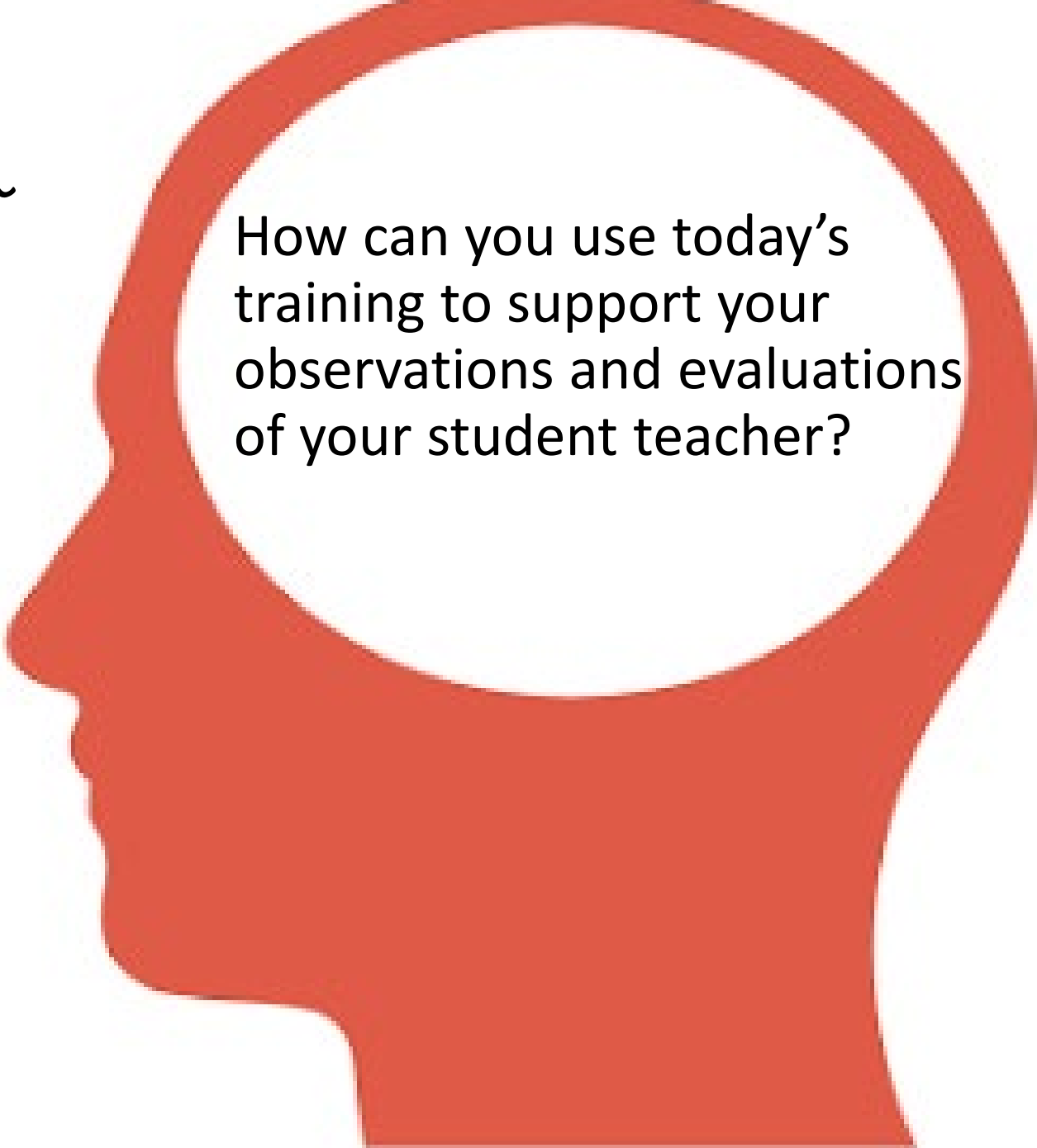


8 responses



- 3- The teacher consistently applies key concepts of the discipline within instruction in alignment to NJSLS. Classroom activities and strategies en...
- 2- The teacher inconsistently applies key concepts of the discipline within instruction in alignment to NJSLS. Classroom activities and strategies en...
- 1- The teacher does not apply key concepts of the discipline within instruction in alignment to NJSLS and/...

Stop & reflect



How can you use today's training to support your observations and evaluations of your student teacher?

Please chat in your response or email it to me.



# August follow up

- Tentative date of August 13<sup>th</sup>
- Structure for candidates with remaining CPE hours
- Review of Spring 2020 data & reset of grading structure
- SGO Assignment for Seminar



# We need your help....

- Formally **review the new indicators** on the supervisor final evaluation
  - Go to <https://forms.gle/nwRd8LajoPPePMyV9>
- Take part in the **CAEP accreditor virtual visit**
  - Sunday June 7<sup>th</sup> meet & greet from 5-6 pm
  - Monday June 8<sup>th</sup> supervisor discussion from 10-10:45 am
- Review and **provide feedback** on the updated Student Teaching Handbook

