

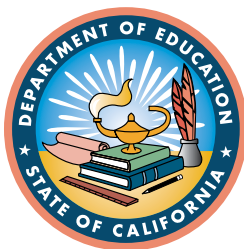


2018-19 CAST Academy

Post-Training Report



**December
2018**



Introduction

The 2018–19 CAST Academy was designed and delivered with the goal of equipping California educators with the knowledge and tools necessary to understand the relationship between the California Science Test (CAST), the California Next Generation Science Standards (CA NGSS), and classroom instruction. This report provides information about the five CAST Academy sessions held in Sacramento, Clovis, Los Angeles, Riverside, and San Diego during October 2018.

The CAST Academy was a valuable professional development opportunity for classroom practitioners on how to use the CAST to improve teaching and learning. Topics covered in the CAST Academy included:

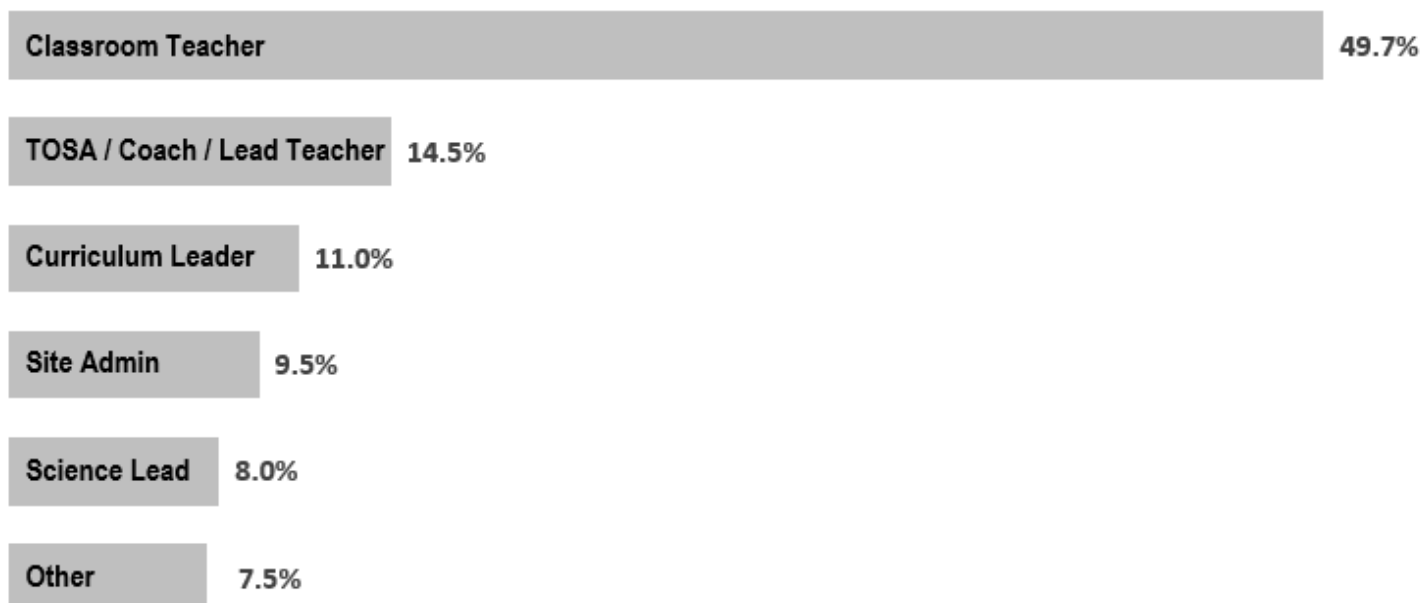
- CAST overview
- Understanding the CA NGSS
- Diving Deep into Test Items
- Implications for Teaching and Learning

Summary of Participants

602 total registered attendees

The CAST Academy was designed as a professional learning opportunity for classroom practitioners. While the attendees were a mix of teachers, administrators, coordinators and others, the majority of them had a clear connection to the classroom.

64% of attendees had a direct link to classroom instruction.

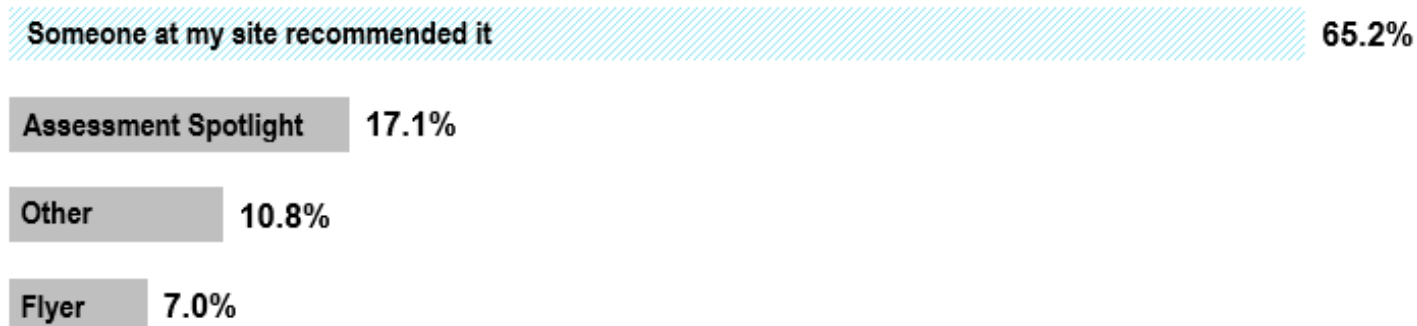


26% response rate

Upon completing a CAST Academy session, participants received an email with a link to a feedback survey. 158 attendees responded to the survey for a response rate of 26%.

Additional participant information is illustrated in Appendix A, Figures 1 through 3.

Most attendees heard about the CAST Academy through word of mouth, as shown by the striped bar.



Findings

Trainers Were Knowledgeable and Locations Were Conducive to Learning

- **97%** said that the trainers were knowledgeable.
- **94%** said that the trainers were responsive to attendee questions.
- **81%** said that the training location was convenient, comfortable and conducive to learning.

The trainers answered all of our questions and knew a lot about the CAST and the NGSS.
 – Participant in Los Angeles

Training Materials Supported Learning

- **93.3%** said that the training materials supported their learning.

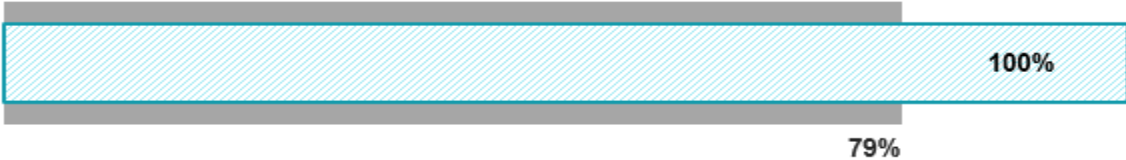
Additional detail illustrated in Appendix A, Figure 4.

Before and After Knowledge

Participants agreed with the following statements before and after the training.

Before
 After

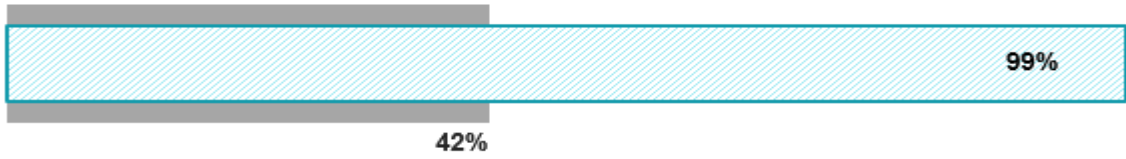
I understand the basic differences between the three dimensions of the CA NGSS:



I understand what the Performance Expectations (PEs) are and how they are structured.



I understand the design of the CAST and its item types.

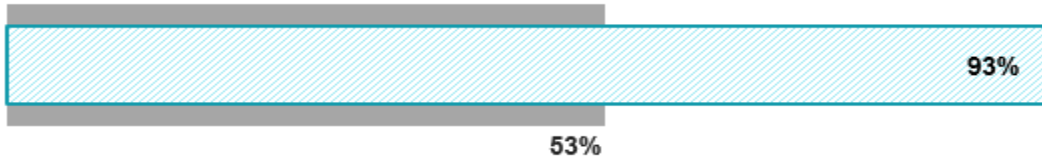


Before and After Knowledge (cont'd)

Participants agreed with the following statements before and after the training.

Before
 After

I understand how to access and utilize the CAST Practice Test.



I understand how the CAST is scored.



I understand how CAST results will be reported.



I walked away knowing so much more than I did before. It was a great day of learning.

- Participant in Sacramento

Participant Suggestions

In addition to answering a number of questions, participants answered two open-ended questions:

- What topics would you be interested in exploring in future CAST trainings?
- What further support, training, or information would help you to make use of the information gained from the CAST Academy at your local educational agency?

All participant responses to open ended questions are listed in Appendix B.

Summary and Recommendations

In summary, most of the feedback received from the CAST Academy participants was positive and provided helpful suggestions on what topics to cover in future trainings. Those suggestions included:

- A better understanding of how to prepare students for the assessment by connecting to classroom instruction
- A deeper structural analysis and discussion of item types
- More about how the CAST connects to the framework, deeper into how it is scored and reported

Based on the comments and suggestions provided by the survey respondents, the SCOE puts forth the following recommendations for future educator trainings:

- Continue to offer a separate professional development opportunity specifically designed for classroom practitioners
- Focus on creating opportunities for participants to hear from their peers about the assessment-related LEA successes, challenges and best practices
- Create opportunities for hands-on exploration of the assessment tools and systems

A complete list of all participant comments and suggestions is available in Appendix B.

Appendix A

Figure 1. Attendee survey response rates by location

Most locations had 25% or more attendees respond to the survey.

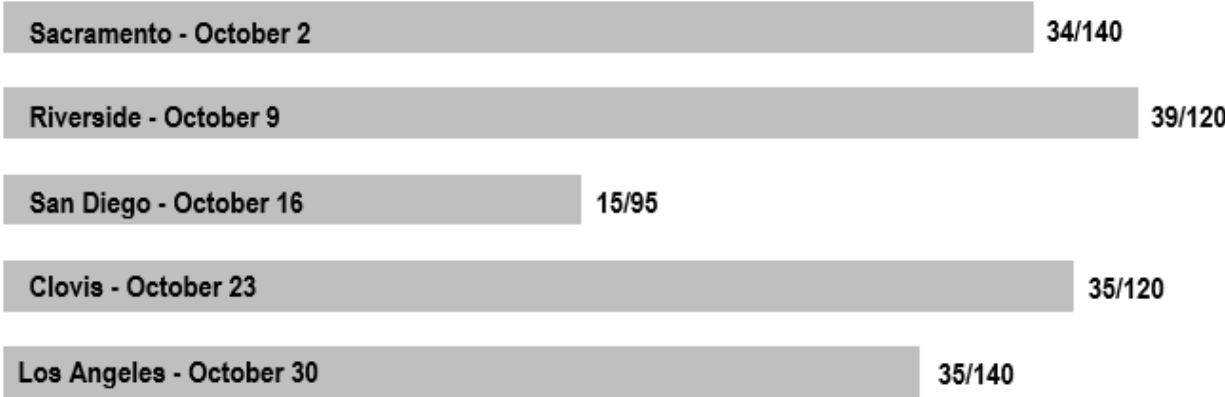


Figure 2. Attendee years in position

Over half of attendees had been in their role for three or more years.

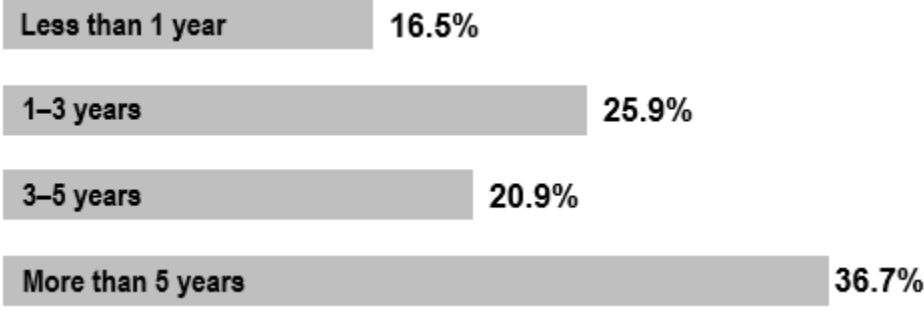
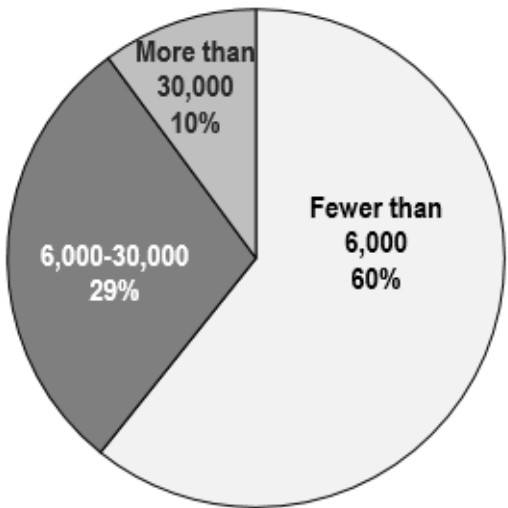


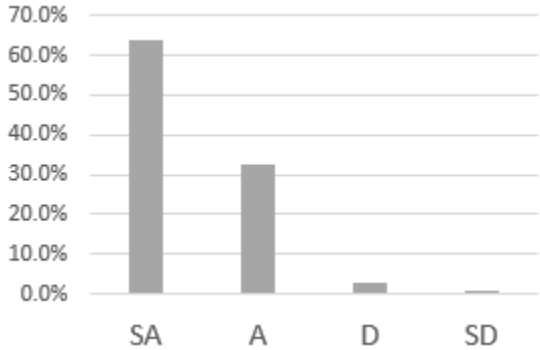
Figure 3. LEA size



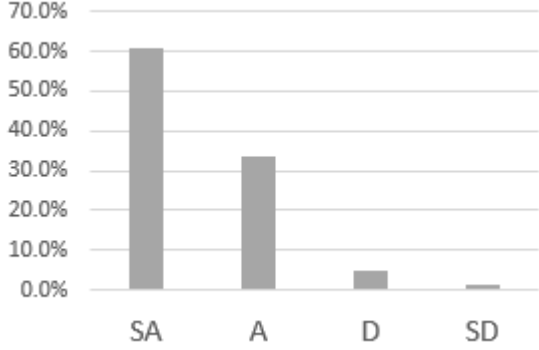
The majority of survey respondents are from an LEA with fewer than 6,000 students enrolled.

Figure 4. Percent of participants that Strongly Agreed (SA), Agreed (A), Disagreed (D), or Strongly Disagreed (SD) with the following statements

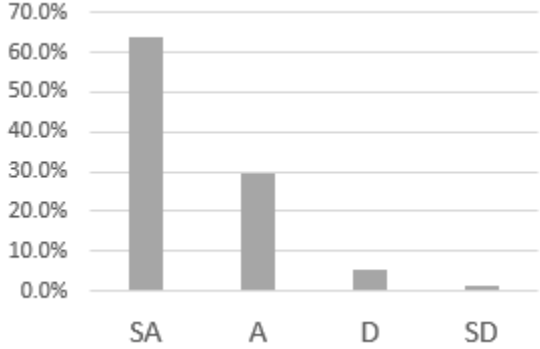
CAST Academy trainers were knowledgeable.



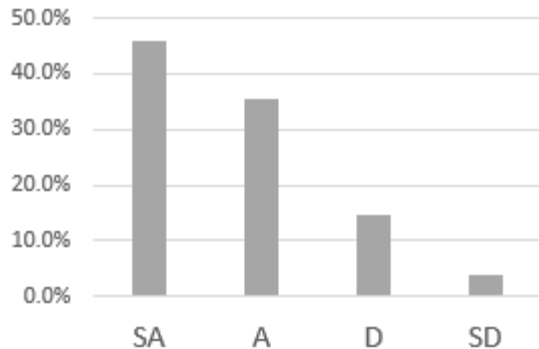
CAST Academy trainers were responsive to my questions.



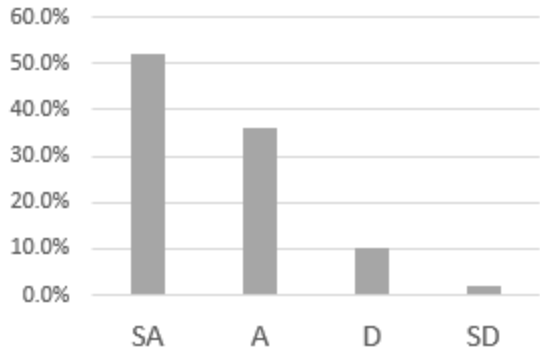
CAST Academy session materials supported my learning.



The CAST Academy training location was convenient, comfortable and conducive to learning.



The CAST Academy was a valuable professional development opportunity.



Appendix B

The comments listed below are verbatim feedback provided by the survey respondents. They have not been changed or edited in any way in order to maintain the integrity of the feedback.

What topics would you be interested in exploring in future CAST trainings?

Accessibility

- Accessibility for students (SPED, ELL, etc.)
- Accommodations for special education students.
- Use of tools available by students when taking the test.
- tools to help prepare students to be successful on a computerized exam
- Troubleshooting/use of universal tools

Resources

- Digitize list of sharing resource ideas (bring a favorite lesson plan)
- share email and content level, for collaboration in the future (opportunity to meet others in later)
- analysis of school site data

Test Structure

- Are there specific DCI's that are more weighted on the test than others? Or specific PE's that are more weighted on the test?
- Better Structural analysis and discussion of multiple choice examples and performance tasks. It seems like either the facilitators were not explicit in their instruction, holding people accountable or enough of them to get the work done. Maybe a smaller training session?
- Common testing mistakes based on question phrasing.
- Deeper Constructed Response Scoring
- Digging deep into the assessment and deconstructing the standards. Scoring the assessments
- Focus on the Middle School Item Specifications once they are finalized and released.
- How PE, SEP, DCI and CCC are spread throughout the test. Is there a percentage of each?
- I would like to dive more deeply into the Item Specs and how instructional shifts with the CAST.
- I'd be interested in learning to write questions using the PE's.
- More about the CAST expectations. What can students expect to face on the test?
- More about the specification subsets.
- More on the construction of the PE and dimensions
- More review of the items and how students see the items online.
- more sample problems, how they will be scored/modified to specific groups of students and their backgrounds, what are some of the assessment programs that can be used to prepare students for the format
- Relating questions to the PE's

Classroom Instruction

- Better understanding how to prepare students for the rigors of the literacy components embedded within the assessment.
- Breaking down the standards and looking at some exemplar program that schools are using in order to prepare for the CAST and incorporate new NGSS standards.
- Collaborative group activities for students discussing phenomena versus demos
- Continue developing my understanding of Performance Tasks and how to develop them with teachers.
- Creating a performance task
- Creating items for current units of instruction that align with CAST items
- Curriculum aligned with ngss standards. Kits
- Curriculum to support student preparedness
- Designing questions for our own quizzes and tests that are similar to CAST style questions.
- Develop phenomena based lessons for teachers to use and modify
- Developing PE Lessons
- Developing practice questions
- Developing the technology to prepare students to use similar simulations and models.
- Digging into a unit for a specific grade level and lesson.
- Examples of how to cover the cross cutting concepts.
- Explore resources that will help better prepare students for the CAST format
- Far more collaboration and designing units/lessons around phenomena with other teachers. If there were presenter who could lead this and be interactive that would be an excellent PD. If they just read the info to the group they are unnecessary, we just need a facilitator to track time while building units with other teachers.
- Going through practice tests that can be deployed formally with teachers/students in the classroom.
- How grading is done; how to make performance tasks and items.
- How to alleviate elementary teachers' anxiety about the content they must teach.
- How to build classroom assessments which mimic the CAST to help students prepare for the test itself.
- How to create performance tasks that are aligned to the PE
- How to create your own assessments in the same style using software just like the CAST.
- How to develop CAST-like questions to use for training in my district
- How to integrate science into ELA and Math.
- How to support English learners
- How to write better assessments for my own classroom
- How to write in class assessments to prepare students to understand how to work through the task types.
- I think that practice in formulating some practice questions would be helpful, especially for the new/incoming teachers.
- I would like to know about how to make plans for teaching the concepts that will help my students for the CAST.
- I would like to learn what resources we could use to prepare kids to take the test.
- I would love to see explore how best teaching practices used with the former science standards can be or are incorporated in with new NGSS standards. I would love to see the new NGSS standards modeled from beginning to end, starting with the phenomenon as a hook.
- Improving classroom experience to better prepare kids for the cast

- Just more about what performance tasks look like according to CAST and how to help teachers write 3D assessment items. Especially within the structure of finals - many teachers revert back to multiple choice only because of the time constraints of that assessment.
- Learning objectives for teachers and students in simplified language both can understand
- Lesson planning aligned to concepts covered on the test would interest me.
- Lesson planning and Unit rubrics
- Lesson planning tailored to standards
- Modeled activities to help prepare our students, or videos.
- More about how to create various assessments to mimic the testing experience
- More about preparation for the test, and how or what to incorporate in my classroom activities that will promote student learning
- More classroom ideas for preparing students to take the test.
- More implication in the classroom please
- More lesson planning and how to implement the NGSS in middle school instruction.
- Some specific strategies to help guide students in preparing them for the thinking and communication skills needed to analyze the scenarios and questions, and how to articulate a high level, 2pt response, for constructed response items.
- Specific lessons for all grade levels that support the CAST

CAST Results

- CAST Results and how it will be incorporated into the Dashboard
- How the data helps her high school students get into college
- Long term effects
- More in depth descriptions on level descriptors & how the CAST is scored.
- More info specific to the scoring and reporting process- exploring and comparing scores across the state and demographic groups
- More on how the CAST items will be scored. -Will there be any instructional resources on CAASPP's digital library?
- Once the student scores are released, I would like to know how to interpret these scores
- Samples of student replies and how they were scored.
- Score reporting and accountability
- Scoring
- When and how will the CAST results be reflected in the CA Dashboard?
- Test scoring/reporting

CA NGSS

- Deep dive into standards
- Deeper connections with the CA Framework. Suggestions for sharing CAST with novice NGSS teachers.
- Did deeper and into the standards
- How NGSS is used to design test questions
- More resources for teaching NGSS
- More specifically about CAST - how it connects to the framework, deeper into how it is scored and reported.
- Sample Lessons aligned with Performance Expectations
- Standard alignment

What further support, training, or information would help you to make use of the information gained from the CAST Academy at your local educational agency?

- Monthly email newsletter
- Video blog of lab ideas
- A lesson design using the standards. Model lessons
- A one pager on how NGSS instruction and pedagogy is reflected on the CAST
- Ability for students, teachers, community to take scored practice tests online and see how they scored and why.
- Access to item specifications
- After the 2019 test, how the questions are scored.
- All administrators especially district level should attend these trainings so they are aware.
- An interactive website that teachers can access.
- An online refresher for all attendees to quickly cover the information that was covered in today's training.
- Bank of phenomena and how to structure units around them
- Brainstorming with others on experiments or activities that really help students understand the concepts.
- Collaborative teaching with colleagues across the DCIs
- continual training
- Creating assessments similar for use in the classroom.
- Curriculum
- Developing NGSS aligned lessons with my science staff
- Easy access to test materials to be copied
- Emailed updates on new CAST information.
- Extra resources for students to practice specific computer testing skills - manipulating models, answers, etc. We practice keyboarding, but one practice test is not going to help them be experts on how to physically answer the questions.
- Clear STUDENT-specific break places in the assessment would be fantastic. The kids are focused on finishing the tests, not listening to how/when they should stop on a particular testing day - a ginormous STOP sign and ask your teacher if you should go on. They often click on the next question without understanding that they will not be able to go back the next day to that section.
- For the SPEC's to be released
- Having valuable resources that are NGSS integrated to follow and use to be successful on the CAST
- How CAST supports learning
- How instruct students so they are successful
- How much of each subject is covered in the CAST?
- How to actual create a lesson
- How to develop authentic performance tasks
- I strongly believe that a resource bank where teachers could access various resources to teach the concepts.
- I would like to see a lesson in action. We would act as the students so we can see what an NGSS lesson should look like and how it would prepare our students.
- I would love to have a CAST Academy part II. Going over the same presentation in a 'break out session' format focusing on grade level specifics. Having a more intimate setting would be beneficial.

- Information about structure and organization of courses at the high school level to effectively teach all the standards.
- Information on how CAST skills are practiced in potential textbook adoption materials.
- Information that really drives home the idea that students will be expected to know the standards across their grade spans for each assessment.
- integration of performance tasks in teaching.
- Item specifications for all standards.
- Lessons, materials, demos, models of what students should be doing
- I would like to have seen the results from last years' practice test broken down by PE or DCI. Even if we were shown that some questions were thrown out. I am wondering how I did in adequately preparing the students.
- Meet with my 5th grade team and discuss what we have learned. All 3 of us attended the training.
- Money to buy supplies for activities.
- More accessible online resources that are readily usable in the classroom to best prepare students
- More in depth detailed performance tasks set up for my grade level
- More on implementation
- More practice for students with feedback to teacher
- More specifics about test administration and logistics.
- Opportunity to share with the smaller districts in our county.
- Perhaps a future training in how the CAST has evolved (if it does), any changes to expect etc.
- Planning tools such as templates
- Planning/implementation time to write our own aligned test questions and labs to support learning and for success on cast
- Please release the item specs!
- Practice with the test question types
- Proper materials to teach the standards
- Reporting
- Resources for parent presentation, letters. Also short overview for teachers who are not science teachers to understand new test
- I felt the trainers spent too much time on NGSS (many basic things that many of us knew already) and not enough on CAST.
- Specific lessons to support the CAST.
- Students supports available on the CAST.
- Teacher trainings
- Teacher workshops on teaching the NGSS in all grade levels.
- Test scores for students
- The DCI breakdown will be helpful, as will the sample items to help teachers better prepare students for CAST. It will also help us build consistent expectations for Science across grades.
- There is a lot of comfort needed with the digital interface for students to be successful. Help with this is needed.
- There was sufficient information on what to expect for the CAST test.
- There were a few times where we wrote down our questions or concerns. Actually being able to ask these questions when they happen could be useful instead of stick it on the poster and maybe they'll answer it.
- Training on how to modify existing questions or write our own questions to mimic the style of the CAST test.

- We need time at the middle school team to sit down and further map out in our scope and sequence; to make sure that we can provide the opportunities that our students will need to be successful.
- We need time to present this to teachers and work on creating lessons and exploring curriculum to teach the NGSS