

**MINUTES  
SCIENCE STANDARDS RECOMMENDATION COMMITTEE  
JUNE 2, 2016**

The Standards Recommendation Committee met for its fourth scheduled meeting at the Tennessee School Boards Association office at 8:30 am CDT.

**Present.....8**

**Ms. Jan Allen Brewer**

**Ms. Marsha Buck – joined remotely**

**Ms. Jeannie Cuervo (Vice Chair)**

**Dr. Kent Gallaher**

**Ms. Annette Hurd**

**Ms. Kattie Nash**

**Ms. LaToya Pugh**

**Mr. Mark Weeks**

**Absent.....2**

**Ms. Lorrie Graves**

**Dr. Sally Pardue (Chair)**

**8:30 AM**

**Ms. Jeannie Cuervo** called the meeting to order. **Ms. Laura Encalade** called role.

**Ms. Cuervo** asked the members to look over the agenda and ask any questions or add comments. **Ms. Marsha Buck** asked if the middle school grade band had finished. **Dr. Kent Gallaher** and **Ms. Annette Hurd** agreed that the conversation should be kept whole group. **Ms. Cuervo** said that the committee should move forward with the agenda and be flexible if they need to do the small group again.

**Ms. Cuervo** asked for a motion to approve the agenda.

**ACTION:** **Dr. Gallaher** moved acceptance. **Ms. Jan Allen Brewer** seconded. The motion passed unanimously.

**8:40 AM**

**Ms. Encalade** began a recap of last week's meeting by giving a brief overview of the different types of feedback reports. She also gave an overview of the feedback trends from across all of the reports.

**8:45 AM**

**Ms. Cuervo** said the committee needed to go back to review and approve the minutes from the May 26, 2016 meeting.

**Ms. Cuervo** asked for a motion to approve the minutes.

**ACTION:** **Dr. Gallaher** moved acceptance. **Ms. LaToya Pugh** seconded. The motion passed unanimously.

**8:50 AM**

**Ms. Encalade** presented a draft of the ten recommendations from the committee. **Ms. Kattie Nash** asked if **Ms. Encalade** had received notes on second and third grade. She replied that she had not and it might need to be something to look at today because the goal of today's meeting is to vote and finalize a set of recommendations.

**Ms. Cuervo** said that it now sounds like groups need to break into small groups to discuss a few outlying standards. **Ms. Brewer** said that there were a few fifth grade standards that others felt needed to be moved to sixth grade.

#### **9:00 AM**

The small groups met to revise and discuss standards work that was unfinished.

#### **10:20 AM**

The small grade band groups reconvened as a whole committee. **Ms. Encalade** put the draft recommendations document on the screen to edit with the committee. She read the first recommendation out loud and the committee agreed.

She moved to the second recommendation and there were no comments or revisions.

On the third recommendation, the committee was in full agreement.

On the fourth recommendation, **Ms. Andrea Allen** discussed the difference between science and literacy and the defining the terms for the committee. **Ms. Buck** asked for clarification on what scientific literacy means in her classroom. The committee opted to divide this recommendation into two separate ones.

All committee members were in agreement with recommendations five and six. **Ms. Nash** suggested adding to the first sentence in recommendation six. She said the progression will help make sure things are addressed in middle school like terminology. **Ms. Buck** said that the word 'research' is key to define and see the progression from the early grades through high school. Defining the expectation of that word is helpful.

For recommendation seven, **Ms. Cuervo** asked for the committee members to present on their specific changes to the standards they have discussed in their small groups. **Ms. Nash** presented on the kindergarten standards that need to be clarified or revised. She explained that they used the comments to look through the specific standards listed. **Dr. Gallaher** said that consistent terms used in the K-12 Framework, such as "solutions" is critical and should be used in all grades.

**Ms. Brewer** said that one thing the middle school team was trying to get to was the term "investigate" to make sure it was consistent. **Ms. Nash** continued to go through the kindergarten standards listed for revisions to be sent back to the educator advisory teams.

#### **10:55 AM**

**Ms. Nash** and **Ms. Pugh** discussed the rationale and changes necessary for three first grade science standards.

**Ms. Pugh** said that it is really critical to get the supporting document correct because it will go together with the standards.

**Ms. Allen** said that she wanted to clarify a few issues before the committee moved forward. The ETS standards are also the standards for application of science. She believed it is good for the early grades to have some autonomy for discovery that is not directly linked to the standards.

**Ms. Nash** continued to discuss the rationale on the first grade standards. **Ms. Pugh** added two standards to be sent back to the educator review committees from the second grade. She also

added a few standards to review for third grade. **Ms. Brewer** and **Ms. Hurd** discussed the specific wording on a third grade standard based on the public feedback.

Based on the discussion, **Ms. Cuervo** asked if the committee wanted to add the words “engineering design process” to recommendation number three.

**Ms. Pugh** said in fourth grade, the standards need to be looked at again specifically for the verbiage. That is the biggest takeaway in fourth grade is to address the consistent verbiage from K-12.

**Ms. Brewer** began her presentation on the standards to review in the recommendations document for fifth grade. She mentioned two standards to move from fifth grade to seventh grade. **Dr. Gallaher** commented that they could move because it is probably not appropriate for a ten-year-old. He asked if students had been taught enough chemistry to understand chemical change in fifth grade. The committee looked back through the current standards to see if fifth grade students learned about chemical change.

**Ms. Cuervo** asked if we would recommend doing away with that standard at all, taking out chemical change in the standard, or moving it. **Dr. Gallaher** asked for some clarification about an example. He said that the two choices would be to move the entire standard to seventh grade or take out chemical change in the fifth grade.

**Ms. Brewer** said that the middle school group had a lot of discussion about animal behaviors for what is learned or instinctual.

#### **12:00 PM**

**Ms. Cuervo** recommended that the committee take a thirty minute lunch and then the committee will regroup.

#### **12:40 PM**

**Ms. Cuervo** called the meeting back to order. **Dr. Gallaher** presented on the specific sixth grade standards that were listed to go back to the educator teams for revisions. Several terms can be mentioned in the clarifying document to define them. One standard was very heavy and he said that some of it needs to be moved to just a clarifying document and out of the standard.

**Dr. Gallaher** moved to the seventh grade standards that need revision. He said that all of them just need more clarity due to the words that make up the standard. He said that some standards were dense and they thought about moving some to another grade but would rather see it in the clarifying document.

**Dr. Andy Hebert** asked if the committee was okay with the fact that they drifted away from the K-12 Framework in order to increase the rigor for Tennesseans specifically. The committee discussed where it was appropriate in seventh grade to increase the rigor. The committee discussed adding a specific standard about the periodic table.

**Dr. Gallaher** began to discuss the eighth grade standards that may be sent back to the educator teams. He read a few pieces of public feedback regarding some of the eighth grade standards.

**Ms. Cuervo** moved the discussion to Biology 1 and 2 standards. The committee discussed whether certain words and topics were appropriate for the age group. Some topics were encouraged to be listed as enrichment topics. As part of the list of words that need to be defined, the committee added the word “evolution”. The committee felt this term is often misinterpreted and a definition could be useful.

**Mr. Mark Weeks** presented a physical science standard that the committee might send back for revision.

**Ms. Cuervo** explained to the committee that it is not their role to advise how to structure the high school courses because that is a district decision.

#### **1:30 PM**

**Ms. Cuervo** moved to recommendation number eight, which encompassed specific standards that they want moved, phrases changed, etc. **Ms. Buck** and **Dr. Gallaher** looked specifically at the sequencing of two eighth grade standards that are part of this recommendation that need a more specific revision.

**Ms. Cuervo** led the committee in a discussion regarding recommendations nine and ten. There is only one example in the recommendation but the committee wants it to apply to the standards throughout.

**Ms. Cuervo** said that for recommendation 11, there needed to be an examination of the alignment between Chemistry I and Chemistry II to ensure that the standards are essential rather than enhanced. There is a lot and it needs to be looked at by the educator advisory teams. **Dr. Gallaher** asked if the courses were too dense to be able to teach in a year.

**Ms. Buck** said that the concern with the two chemistry subjects, the statement should be stronger. **Ms. Cuervo** added some standards to the statement for example.

**Dr. Gallaher** applauded the work of the educator advisory teams because they did such a tremendous job on the standards and noted that there are not a lot of changes to be made because the standards are already so strong.

**Ms. Cuervo** asked for a motion to approve the recommendations.  
**ACTION:** **Ms. Hurd** moved acceptance. **Mr. Weeks** seconded. The motion passed unanimously.

#### **1:55 PM**

**Ms. Cuervo** said that the next agenda item is to move to a discussion on a possible science position statement from the committee.

**Ms. Hurd** asked when the standards for teachers will be available online. **Ms. Encalade** said they will be available online throughout the process. **Ms. Brewer** asked when the leads would receive their recommendation document. **Ms. Encalade** said that the educator advisory team leads would receive the recommendations this afternoon to begin working on them.

Members of the committee talked through action items and timelines for things such as assessment and trainings once the standards are finalized.

**Ms. Brewer** asked specifically if there would be website support if that is recommended in their position statement just like math and ELA. **Ms. Encalade** answered that there is no way to know for certain if there would be funding for a support website in FY 18 but they can recommend that as a priority.

**Ms. Cuervo** suggested that the committee discusses specific headings for the position statement that they can then expound upon at the next meeting. The committee discussed various components including the following:

- Professional Development
- Supplemental Resources
- Assessment
- Empowering Educators

**Ms. Cuervo** said that in this position statement we are not specifying that the department of education is the only one to share this document with.

**Ms. Nash** said that the elementary teachers need the most support because that is also where the public gave the most feedback.

The committee discussed ways to mention a purposefully aligned ACT high school science assessment.

### **3:20 PM**

**Ms. Cuervo** said that the next meeting is Thursday, July 7<sup>th</sup>. The educator team leads will be presenting about the revisions that they have recommended. Also, the position statement will be finalized.

**Dr. Gallaher** thanked **Ms. Cuervo** for acting as the chairman and leading the meeting today.

**ACTION:** **Ms. Cuervo** asked for a motion to adjourn.  
**Mr. Weeks** moved acceptance. **Ms. Nash** seconded. The motion passed unanimously.