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TO: Paul Hambleton, Maine Department of Education

FROM: Heidi McGinley, Executive Director, Maine Curriculum Leaders' Association

RE: Science and Social Studies Review Comments

DATE: March 16, 2018

The Maine Curriculum Leaders' Association's (MCLA) members have asked the board of directors to provide comments on the science and social studies reviews. The board is composed of twelve curriculum leaders representing nine regions of the state. They work in K-8 and K-12 districts of various sizes with varied student demographics. The board offers these points for the department's consideration:

1. The purpose of state standards should determine the structure and content of the standards themselves and the process and composition of the review panels.
2. The review process for all content areas should be transparent and overseen by a single stakeholder steering committee.
3. National resources that inform state standards development in both content areas include cross-cutting skills and practices, both within each content area and across several others. Science and social studies reviews should also include identification of cross-disciplinary connections.

Rationale for Our Comments

These reviews take place amid widespread uncertainty about the possible role of state standards in local curriculum, instruction, and assessment. District accountability for state standards implementation currently includes participation in state assessments and a statutory requirement that districts align their local curriculum with the state standards. When the proficiency-based diploma requirements were enacted, the department chose not to require districts to use the state standards as diploma requirements. As a result, districts chose their own diploma standards and developed their own grade span learning progressions to support them, often using national standards in science and social studies to guide local curriculum, instruction, and assessment.

The department's recently proposed amendments to the statutes governing the system of learning results and the proficiency-based diploma requirements indicate a desire to hold districts more accountable for student proficiency of state standards in all content areas at all grade spans. The central issue raised through those proposed amendments is local control of curriculum, instruction, and assessment versus comparability of specific student proficiencies across districts. The public comment period on the state's science and social studies standards takes place before state policy makers determine the balance between local control and comparability. That decision should determine the structure and reach of revisions in the content areas. We think the following questions need to be answered publicly by policy makers before review begins:

- Will there be a state-identified set of diploma standards at the high school level of rigor? Will those standards describe the essential core of knowledge, skills, and understandings all students need for post-secondary readiness? Or will they describe the complete breadth and depth of content knowledge in the content area? Or both? Will new state standards replace those that districts have already identified for diploma purposes? When?
- Will the new standards and descriptors be a *model* K-12 curriculum or a *required* K-12 curriculum? Will districts be able to choose those standards they believe are most important for all students' post-secondary options? How will districts be held accountable for implementing these new state standards and indicators?

We think the review process itself and those involved in it should be consistent with the identified purpose of the standards. We haven't seen a written description of the process, but did hear it described in an Education Committee work session. The process appears to involve steering committees for each content area and panels of content area teachers at each grade span. We don't know if there is an overarching cross-content steering group, and if there is such a group, who is included in it. If the purpose of the next version of the standards is to identify essential knowledge and skills for all students, we think a wide variety of educators and others need to be included in the review. We also think that regardless of the ultimate purpose of the standards a representative stakeholder group should serve as the overarching steering committee for review and revision of all content areas.

Science Review Comments

MCLA polled our members a year ago on their use of the NGSS. The poll results indicate that districts find the NGSS helpful, but have been selective in the standards they're actively using to guide curriculum, instruction, and assessment, and in determining diploma requirements. The complete poll results are included at the conclusion of our comments.

Social Studies Review Comments

There are five social studies resources curriculum leaders use to inform local social studies curriculum: 1) state requirements for specific social studies content (Maine studies, for example); 2) the thematic standards promoted by the National Council for the Social Studies; 3) the national C3 Framework for the Social Studies; 4) Maine's ELA standards; and 5) other states' social studies standards. We think a helpful starting place for social studies review and revision is identification of the diploma standards districts have already chosen.

Cross-discipline Comments

The national frameworks and standards in both science and social studies emphasize cross-cutting skills and practices. Those cross-cutting skills are embedded across the domains in each content area and explicitly connected to student proficiencies in other content areas. The C3 framework, for example, recommends both disciplinary integrity and interdisciplinary connections. NGSS also identifies clear connections with ELA, mathematics, and social studies.

We recognize the logistical difficulties in managing review and revision of one content area at a time on a five-year cycle. However, we think recognition and articulation of cross-cutting skills is necessary in a proficiency-based learning system. We don't think revisions in these two content areas in particular will be helpful to districts without a comprehensive review of the related content areas at the same time.

MCLA January 13, 2017 NGSS Poll Results

1. NGSS and graduation standards:

a. We chose some NGSS as graduation standards.	39.5%
b. We chose graduation standards and indicators from the existing science MLR's.	0%
c. Our graduation standards are a mix of NGSS and MLR's.	34.9%
d. We developed our own science graduation standards and indicators.	2.3%
Other	25.6%

Comments:

- We would love to see NGSS become the standard of science targets.
- We are a K-8 district
- The Science and Engineering Practices are our graduation standards
- We used MLR standards and aligned PIs from NGSS to them.
- We are using domains from NGSS for Stds (PS, LS, Engineering & Tech) and indicators all referenced to NGSS

2. NGSS K-8:

a. We're using most of NGSS to guide K-8 curriculum, instruction, and assessment.	56.3%
b. We're using some of NGSS to guide K-8 curriculum, instruction, and assessment.	6.3%
c. We're using a mix of NGSS and other existing standards to guide K-8 curriculum, instruction, and assessment.	20.8%
d. We're not using NGSS.	6.3%
Other	12.5%

Comments:

- Our high school adopted NGSS and the k-8 is very reluctant.
- We are moving forward with NGSS but currently some use MLRs and some use NGSS as we unpack the NGSS and get our docs in order.
- We are using NGSS at our high school as well.
- No one can address ALL of NGSS any more than we could any other content standards bank, but it is current, nationally vetted, and research-based.

3. Are you in favor of replacing the MLR science standards and indicators with the Next Generation Science Standards?

Yes	98.1%
No	0%
Unsure	1.9%

Comments:

- It is imperative that we use the most current learning targets for our students if we indeed wish to prepare them for a changing society where STEM knowledge and skills are crucial to success in the majority of careers.
- AND...the state will need to thoughtfully roll out assessments on a delayed timeline so that implementation of NGSS standards (a big shift like CCSS shifts) can catch up to the assessment.
- My high school teachers want NGSS. My k-8 are less enthusiastic and some are actively hostile.
- The NGSS have been reviewed and found to be superior to the present set of science MLRs, even by the Fordham Foundation
- The MLR for Science do not compel all districts to make advances in Science education. The move to NGSS is a long time coming. We are prepared, students deserve policy to support their futures.
- Absolutely. See above

4. If you answered yes to Question 3, which of the following influence your position? (Choose any that apply.)

a. Since many districts are already using NGSS, it makes sense to adopt them officially.	62.7%
b. NGSS adoption will bring additional support for districts in science curriculum, instruction, and assessment.	64.7%
c. NGSS adoption will alleviate teacher concern about changing instruction to align with NGSS.	54.9%
d. NGSS are well-constructed and emphasize common practices and complex thinking skills that cross content areas and disciplines.	92.2%
Other	5.9%

Comments:

- It just makes sense to align with national standards.
- The MEA test will align with what is expected to be taught
- Our district can't afford to adopt commercial programs. With professionally vetted standards like NGSS, there are many resources developed by other states, professional organizations, and companies (i.e. leveled nonfiction books) that are already aligned to our grade level standards.

5. If you answered no or unsure to Question 3, which of the following influence your position? (Choose any that apply.)

a. Since districts can choose or write their own diploma standards and indicators, the MLR's are much less important to us than they once were.	0%
b. There's no time to work on K-12 science curriculum, instruction, and assessment right now.	100%
c. The science portion of the MEA could be expanded if NGSS is adopted.	0%
d. The rule making process for NGSS could lead to changes in the state's standards and proficiency policies.	100%
Other	0%

Comments:

- At this point, I am at a loss regarding what I should make a priority in my district's goals. My superintendent views everything as equally important and equally quick/easy to implement. With the massive changes around PBE diplomas, college and career readiness, and the PEPG system, and increased student need due to poverty/family drug abuse and etc., I just don't know how to triage this without making a mess for the district. My focus is on PBE right now and getting the high school ready to track standards and report on all the PBE diploma requirements.

6. Are you in favor of including NGSS in the state assessment?

Yes	69.2%
No	15.4%
Unsure	15.4%

Comments to explain your position:

- We are currently assessing science so if the state wants to continue the assessment, it should be assessing the NGSS standards that are being taught.
- Meaning, not yet. Give it a few years to become common practice, then yes.
- Yes, I am in favor of assessing the NGSS in our State test. I am not in favor of including the results in teacher/principal effectiveness ratings.
- I am in favor of more focus on science and engineering, but when the state touches things it often turns into an excessively cumbersome mess.
- If we have to have a statewide assessment in science then it should be based on the NGSS. I'd rather not have statewide high-stakes assessments in general, though.
- Science is already assessed; this just aligns what we are teaching with what is assessed - that is just reasonable policy!
- IF the state assessment focuses on three dimensional learning without over-emphasis on the details embedded in the core ideas, then the assessment would better align with what we do.

- We are not yet ready for that. We need to engage teachers and assist them in learning the standards and how to effectively teach to them first. We need three more years before the accountability piece.
- As one of multiple factors in an accountability system and with an emphasis on growth as opposed to just proficiency.
- It is too much too fast.
- Unless there is fiscal support, such an accountability measure further separates the "haves" from the "have nots" - even with the best of intentions.
- This also means supporting transitions for educators and students.
- Because science is only assessed in benchmark years, a lot of the content is already aligned.