

From: [Ryan Hickerson](#)
To: [1490Comments](#)
Subject: issues with the new Missouri Learning standards in Biology
Date: Monday, March 07, 2016 7:36:32 AM

I would like to first address that our district (Rolla Public Schools) sent a list of questions and issues that need to be addressed regarding the new learning standards for science, and we never received any reply. We were told that you may feel that because so few schools replied, that everyone must feel these standards are acceptable. I hope this email does not fall on deaf ears, but here are my issues with these new standards. I feel these need to be addressed immediately, and I would like a response clarifying my questions, please.

I would like to note, all of these issues are regarding the Life Science Standards for 9-12 grades.

1. The only aspect of organic chemistry covered is that there are 6 specific elements used in organic compounds. That is grossly insufficient and more emphasis should be put on the use, function, and importance of each compound.
2. There is not a single standard regarding cell structure and function except for in relation to photosynthesis and cell respiration. I can not see a way to properly teach a child how the cell accomplishes specific tasks of survival without teaching these concepts/facts. There needs to be a standard discussing the function and incorporation of all of the cells organelles, not just mitochondria and chloroplast.
3. There needs to be standards on cell transport, how materials move in and out of the cell. This understanding allows students to understand a host of everyday phenomena like, why water is important for brain function, muscle development, digestion, and why cells shrivel or swell, and why consuming too much or too little of water, salt, sugar, etc can cause reduced function, organ failure, passing out, or death. These are very important to any citizen.
4. For testable objective "Create and use a model..." does not work for a standardized assessment. You can not test the creation and usage of a model on 7 concepts. We as teachers can assess that, but not the state. An assessment that truly did accomplish that would be so expensive, it is not even feasible.
5. How does one "construct and revise an explanation on evidence that organic macromolecules are primarily composed of six elements...to form large carbon-based molecules?" Are they explaining why these are present? What are they "explaining"?
6. Here are the subjects that are covered under the new standards: mostly Genetics, Cell Energy, Ecology, and Natural Selection/Evolution, with a little cell division and anatomy and physiology. I'm knocking them, but it does not take that much time to teach the four main units we are testing, even if we make them model everything. This is an introductory section and in order to understand the basics of biology, one must learn the underlying components, ie. Atoms, molecules, compounds, organelles, and the interactions with all of these.

Questions:

1. Hs-ls2-1 what is meant by "mathematical representation"? does that mean the 10% rule?
2. What does modeling refer to? How will that be assessed? Are the students supposed to

create their own, or are they given one to manipulate and evaluate? Will they have specific materials or objectives with their model?

3. HS-LS1-2, at what level are you meaning; cell, organ, organ system, all?
4. How do we assess ability to model? How will the state assess that?
5. Why is modeling used so much?

Thank you,

Ryan Hickerson

From: [Loganbill, Kari](#)
To: [1490Comments](#)
Subject: State standards
Date: Monday, March 07, 2016 10:32:14 AM

After reviewing the draft of the new Missouri State Standards, I feel that there are several areas of concern in all subject matters. I feel that the standards are very vague, and there needs to be more examples given to determine what needs assessed. I feel that the Science is very broad and needs to be broken down to specific goals. The Social Studies standards level of content seems very difficult for each grade level and the concepts should remain at their current grade levels (example: 4th grade should still focus on Missouri History, 3rd grade should still focus branches of government and not Missouri history, etc.) As a 2nd grade teacher, I feel that 2nd graders are still trying to understand the concept of their local community and how that type of government works.

In the Math standards, 2nd grade is the only grade level that introduces, teaches, and assesses money. I would like to have some clarification on what is expected for fluency for basic math facts for addition and subtraction within 100. For the Writing standards, I feel that 2nd graders are still working on learning how to print legibly with correct spacing and knowing when to capitalize and should not be expected to use cursive writing until 3rd grade.

Thank you for taking the time to review my comments, and I hope that you will take them into consideration.

Sincerely,

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From: [Dickey, Kelli](#)
To: [1490Comments](#)
Subject: FW: Proposed Mathematics Standards
Date: Tuesday, March 08, 2016 9:20:37 AM

FYI

From: Ann McCoy [mailto:mccoy@ucmo.edu]
Sent: Monday, March 07, 2016 8:53 PM
To: Commissioner of Education; Ellis, Jeremy (DESE); State Board of Education
Subject: Proposed Mathematics Standards

Missouri State School Board and Department of Elementary and Secondary Education:

The Executive Board of the Missouri Council of Teachers of Mathematics appreciates the time and efforts of the workgroups who have developed the proposed mathematics learning standards that are currently under review by the State Board of Education. We are pleased the groups created standards that reflect powerful learning progressions that emphasize the need for teachers to consider how mathematical concepts are developed and connected.

However, we are concerned that the current format of the standards will cause the connections among mathematical concepts to be lost. As structured currently, it will be difficult for teachers to see how concepts develop within and across grade levels. We believe the proposed format may foster the teaching of mathematical concepts in isolation. In addition, we believe the mathematical practices must be prominently included so that teachers recognize the importance of emphasizing the development of these practices.

We strongly encourage you to adopt the mathematics standards in the format established by the workgroups and to include the mathematical practices as an essential part of the standards.

Sincerely,
Missouri Council of Teachers of Mathematics Executive Board

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