



# Doc H's Blog

**Kentucky Education Commissioner  
Terry Holliday**



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## **Science standards, assessments and Senate Bill 1**

Since the day Senate Bill 1 passed the General Assembly in spring 2009 and the Governor signed it into law, the Kentucky Department of Education and the Kentucky Board of Education have been working diligently to fully realize the requirements of this visionary legislation: more rigorous academic standards, new assessments, a balanced accountability system and professional development for educators in support of the new standards.

In early 2010, the Kentucky Board of Education, Council on Postsecondary and the Education Professional Standards Board took the first big step in carrying out Senate Bill 1 when they joined to adopt the Common Core State Standards in English/language arts and mathematics. Teachers immediately began working to unpack and interpret the standards. During the 2010-11 school year, educators began developing curricula and instructional materials. Schools gave the first assessments of the new standards in spring 2012. Teachers had almost two years to develop instruction and materials that were aligned to the new standards prior to the assessments.

States began working to develop new science standards in 2010. These standards went through numerous review cycles and to date, 12 states have fully adopted the Next-Generation Science Standards. Kentucky did so in 2013 and since that time we have been working with educators to repeat the process used for implementing the English/language arts and math standards. Also, just as we did with the new standards in the first two content areas, we will delay assessment of the new standards until teachers have had nearly years to implement. Testing on the new science standards will occur in spring of 2016.

The new science assessments will be very different than any previous assessments – not confined to paper and pencil, fill-in-the-bubble, multiple choice. The science assessments would be taken online – similar to what is being done with the new National Assessment of Education Progress (NAEP) assessment in [Technology and Engineering Literacy \(TEL\)](#). This assessment measures not only science content, but also measures scientific process and problem solving. Early reports from the first administration of the TEL assessment are extremely positive. Students are much more engaged in the test-taking process and the data provide educators not only information on students' factual knowledge but also their problem solving skills.

Due to the complexity of developing such a test, the new science assessment will require more funding to create than traditional tests. However, online assessments produce savings in the long run since we are able to eliminate printing paper tests, shipping, storage and other related costs. With the need for additional funding to develop the science assessment, the Kentucky Department of Education identified a short term cost savings by not administering the K-PREP science exam in 4th and 7th grades in 2014-15. Teachers and administrators strongly supported this decision since the current K-PREP test in science assessed the old standards and starting in the fall, students would be learning the new standards.

However, this decision does not mean that we cannot track science learning in Kentucky. In 2014-15, our students will still take science assessments as part of the Explore (8th grade), Plan (10th grade), ACT (11th grade), and Biology end-of-course (high school) assessments. These assessments will provide a clear picture of our performance in science relative to other states and the rest of the nation. Also, Kentucky will continue to participate in and receive state-level results for the National Assessment of Education Progress science assessment for 4th- and 8th-grade students.

By 2015-16, we will have one remaining subject area to implement – social studies. We anticipate that the draft social studies standards will go out for public comment this fall and we will begin working with teachers in 2015-16 to implement the standards and develop new social studies assessments for 2016-17.

Transformation does not happen overnight. From a concept laid out in Senate Bill 1 in 2009 through actual implementation of all the requirements in 2017, will be an eight year journey that, thus far, has been very rewarding, frustrating and just plain hard work for teachers and administrators. Parents and students have also had to endure many changes and modifications to K-12 schooling during this time.

Over the next year or so, we will hear from many politicians (state and national) who were not involved in the Senate Bill 1 process. For political reasons, they will push for “education reform.” We will hear calls for new standards, new assessments and new accountability – once again. However, we should all be persistent in asking why change is needed, what the cost will be, what impact another change would have on teacher morale, and what the impact would be for parents and students.

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Education Commissioner