

**Report to the House K-12 and Vocational/Technical Instructions Permanent  
Subcommittee of Education  
Update on the Implementation of the Next Generation Science Standards  
March 14, 2016  
Michele Snyder**

The Arkansas K-12 Science Standards represent a fundamental change in the way science is taught, and if implemented well, will ensure that all students gain a mastery of fundamental concepts of science. My charge is the implementation of the Arkansas K-12 Science Standards (based on the Next Generation Science Standards), which were developed by and for Arkansas K-20 science educators.

**Assessment**

-**The ACT Aspire** will be administered in Grades 3-10 and **The ACT** in Grade 11 this spring. This summer ADE will be meeting with K-8 special education teachers and science teachers to revise the **Arkansas Alternate Portfolio Assessment Resource Guide** for assessing students with significant disabilities in Grades K-8.

**Professional Development**

-**Science specialists** from the education service cooperatives and university STEM centers have received training for three years on best practices for science instruction and professional development strategies using the new standards. Over **125 school districts** are currently engaged in science professional development, school-based professional learning communities, and early implementation of the standards with the guidance of the science specialists.

-**ADE science workshops** titled *Grasping Phenomenal Science: Navigating from Standards to Instruction* will target teachers of Grades K-4, 5-8, and 9-12 and engage participants in grade-specific lessons to help students make sense of science phenomena. ADE is anticipating reaching over **1000 science educators** in June - August.

-**USDOE Math and Science Partnership grants** have begun a new cohort across the state with a focus on K-4 science instruction. Over **78 school districts** are involved in these professional development projects.

-**AETN Arkansas Ideas** on-line professional development portal has added several new science modules focused on the new standards, including one for administrators and one on good habits for elementary science safety.

- **Informal science educators** from the Arkansas Game and Fish, Discovery Network, Project Wet and Wild, National Parks and others engaged in professional development workshops in February across the state. Comments from participants included "Thanks so much for the workshop today! I'm so encouraged . . . for several reasons. I feel so much more informed about what's coming. I feel I can now speak intelligently about the standards. I so appreciate the resources you have collected for us."

## Curriculum

The development of the Arkansas K-12 Science Standards involved **66 school districts and 10 postsecondary institutions**. Grades K-4 will implement in August 2016, Grades 5-8 in August 2017, and Grades 9-12 in August 2018. Development of new high school science courses continues. Next steps include editing, requesting community feedback, and making last minute revisions prior to submitting to the State Board of Education for approval.

**-Proposed courses for science graduation credits:** Physical Science, Biology, and Principles of Chemistry and Physics (a course that teaches foundational chemistry and physics concepts/skills to all kids). Only 1% of students in Arkansas currently take a physics course, not enough to prepare Arkansas students to meet 21<sup>st</sup> Century workforce and college demands.

**-Proposed courses for STEM career focus credits:** Human Anatomy and Physiology, Astronomy, Earth Science, Environmental Science, Chemistry, and Physics.

**-Proposed Accelerated Pathway** for sub-population of gifted and talented students recommends an optional accelerated sequence of the middle and high school science standards for those students who wish to pursue Advanced Placement (AP) or International Baccalaureate (IB) courses.

## Communication

Multiple audiences are being briefed on the new standards, the implementation timeline, and implementation tools.

**-Arkansas Educators:** AAEA Superintendent Symposium and upcoming ALE, AACSD, AMLE, and ACC annual education conferences; leadership meetings at Northwest, Ozarks, Guy Fenter, Crowley's Ridge, and Northcentral Education Service Cooperatives; Arkansas STEM Coalition local and regional meetings; directors of Little Rock Boys and Girls Club

**-Arkansas Health and Natural Science Associations:** meeting with the Arkansas Pharmacists Association and continuing to seek feedback from the Arkansas Medical Society and Arkansas Dental Society.

**-Arkansas Press:** "New Scientific Approach" by Lynn Maguffee, *The Sun* February 7, 2016; "Schools Prepare For Changes In Science Instruction" by Brenda Bemet, *Northwest Arkansas Democrat Gazette*, February 5, 2016; and "Engineering Standards" by Steve Brawner, *Arkansas Professional Engineer and Report Card*, February 5, 2016

**Find more information about the Arkansas K-12 Science Standards at this link:**

<http://goo.gl/qPLkUA>