

**HORRY COUNTY SCHOOLS  
MONITORING REPORT – R-3 Science**

I certify that the information in this report is true.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
Rick Maxey, Acting Superintendent

Disposition of the Board:

- \_\_\_\_\_ In compliance
- \_\_\_\_\_ Not in compliance
- \_\_\_\_\_ Compliance with exception

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
Joe DeFeo, Board Chair

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

R-3 – Science	Supt	Supt	Board	Board
	In compliance	Not in compliance	In compliance	Not in compliance
Each student will achieve mastery of performance standards in science.	✓			

**Interpretation:** I interpret this policy to mean that Horry County Schools will implement a course of study that is aligned with the South Carolina academic standards for K-12 for science that will prepare students in the areas of life, physical, earth science, inquiry, and science and engineering practices. In the area of science, the offerings at the high school level include courses in physical science, chemistry, biology, physics, marine science and environmental science, anatomy and physiology, forensic science and biology II.

I further interpret this to mean that the staff will regularly monitor and evaluate the instructional programs at each school as part of the ongoing efforts to improve student learning in the area of science. Staff will also provide ongoing support through professional development opportunities designed to build capacity by establishing exemplary science curriculum and assessments, developing content knowledge, and fostering strong literacy experiences for our K-12 science teachers.

**Indicators of Evidence and Compliance:**

**We are in full compliance of this policy. Evidence is listed below:**

- Horry County Schools curricula and course offerings are aligned with South Carolina State Science Standards (2005). The district is in the process of transitioning to the newly adopted state science standards (2014). Instructional materials adoption processes comply with state requirements.
- Implementation of the South Carolina state support document has been an emphasis since its release in August of 2007. The support document outlines this information for South Carolina teachers: previous science knowledge; future knowledge; level of Bloom's Taxonomy; essential learning and non-essential learning; and assessment guidelines.
- Science kits and lab materials have been developed to support science instruction in grades K-8.
- High school science funds are used to replenish lab materials and resources.
- The District opened and has continued to maintain a science kit distribution center since the 2010-2011 school year to supply science kits to elementary classrooms.
- Additional science kits were added for grades 2-5 to allow for a more flexible pacing schedule.
- Availability of online resources and instructional technology tools have increased in the last several years.
- The Discovery Education Science Techbook has been implemented as a resource to support grades 6-8 science teachers and students.
- Consensus maps (pacing guides), lesson plans, and assessments have been developed to support improved teaching and learning.
- Eighth-grade honors science and high school honors physical science, biology, and chemistry curricula have been refined to utilize ACT College and Career Readiness Standards. AP assessment items and extended-response items are being implemented in middle schools. We are in the process of integrating practice with ACT/Aspire science items into grades 6-12 science curricula.
- Expanded teaching strategies such as content vocabulary, content-area literacy, interactive notebooking, problem-based learning, scientific modeling, and writing portfolios have been areas of focus.
- All high school biology classes have digital microscopes that will independently collect, organize and graph microscopic data and save the data for study or presentations.
- Project Lead the Way (PLTW) programs are offered at Conway High School and The Academy for Technology and Academics.
- The 2015 FIRST Palmetto Robotics Challenge was held at the Myrtle Beach Convention Center the last week of February. HCS was the only district in SC to have a team entered from all of its high schools. The Conway High "Robo Tigers" placed sixth overall out of sixty-five teams and chose ATA "Team Volt" and AAST "Aluminum Assault" as a part of their alliance for the quarter-finals for the State championship, producing the first ever district alliance in a finals match. The Carolina Forest High "Robo Kats" were selected by the first place winning team to join their alliance and went on to be the winning alliance for the total competition. They advanced to the FIRST National Championship in St. Louis, Missouri.

- AAST's Aluminum Assault Robotics team comprised of pre-engineering students competed in the quarter-finals in the NC Regional's FIRST Robotics competition and advanced to the FIRST National Championship in St. Louis, Missouri.
- The SC FIRST Lego League for Robotics held a qualifying event at Coastal Carolina University on Saturday, December 13, 2014. HCS had 23 elementary and middle school teams participate with original robot designs, challenges, core values, and research projects.
- The SC FIRST Lego League held two state championships this year due to the number of participating schools. The qualifying teams from the following Horry County Schools were assigned to the Eastern Championship held on March 7, 2015 at Summerville High School: Black Water Middle School, Carolina Forest Elementary, Ocean Bay Middle School, River Oaks Elementary, Ocean Bay Elementary, and the Academy of Hope. Ocean Bay Middle School received the "Mechanical Design" award for their Robot Design.
- Advanced Placement opportunities have continued to increase in schools. HCS has maintained overall district enrollment in AP science courses and increased passing rates by 3.18% from 2013 to 2014. The district currently offers four science AP courses, including AP Biology, AP Chemistry, AP Environmental Science, and AP Physics.
- District-developed benchmark assessments have been implemented in grades 3-8 and in biology and are being used as tools to progress monitor mastery of standards and to assist teachers in making instructional decisions.
- A district plan has been developed to aid in the transition from the South Carolina Academic Standards (2005) to the South Carolina Science and Engineering Standards (2014).
- A S<sup>2</sup>TEM grant was awarded by the Coastal Pee Dee S<sup>2</sup>TEM Center to Green Sea Floyds High School. The grant is a continuation of a three year research project designed to test the effectiveness of specific literacy instructional strategies on student achievement. This is year 3 of the grant.
- Horry County Virtual School has continued to offer an array of science courses.
- Teachers' expertise is recognized, and they are asked to share their knowledge with others at state and national conferences.
- Teachers serve on various state committees to include but not limited to standards setting, curriculum teams, assessment, and textbook adoption.
- Fifth and seventh grade students participate in the Soil and Water Conservation sponsored essay contest that requires students to research information on a science standard and then write an essay.
- Horry County Schools is continuing its partnership with the South Carolina Governor's School for Science and Mathematics to offer Project Accelerate for tenth grade students interested in becoming engineers. The program is currently in its third year.
- Horry County Schools is continuing to partner with the South Carolina Governor's School for Science and Mathematics to offer the iTEAMS (Innovation, Technology and Entrepreneurship Among Middle Schoolers) summer camp for rising 7<sup>th</sup> and 8<sup>th</sup> graders.

- Review of digital content is ongoing and the District is focusing on tools to support science instruction.
- Horry County Schools continue to offer a 4-year STEM program for students.
- Library Media Programs support science standards by encouraging a culture of reading emphasizing informational text, providing print and digital resources for reading and investigative research, implementing MakerSpace areas for creating and problem solving, and offering professional development for teachers on the utilization of resources.
- Support is provided for personalized digital learning (PDL) and blended learning into the science curriculum by planning with the instructional coach and science teachers for technology-integrated lessons.
- Evidence-based writing has been embedded into K-12 science with students developing claims backed up with evidence and scientific reasoning.