

Major Entrance Requirements

- Two Units of English
- Two Units of Math (must include Geometry or Algebra 2)
- Two Units of Science (must include Biology)
- One Unit of Physical Education

***No prior knowledge or experience is required for entrance**

Application Process

- Apply online through Horry County Schools or the AAST website.
- Thoroughly complete the application before the deadline
- If accepted, return the acceptance confirmation by the district deadline.

Vision

Realize the Possibilities

Mission

AAST is a Cognia whole school STEM certified school committed to preparing its students to be college and career-ready global citizens by fostering creativity, innovation, systematic problem-solving, and critical thinking through participation in rigorous and authentically collaborative academic and career experiences.



What is STEM?

STEM stands for Science, Technology, Engineering, and Mathematics. STEM is a philosophy of education embracing teaching skills and subjects in a way that resembles real life. STEM is about discovering and creating ingenious ways of problem solving, integrating principles, or presenting information. Instead of teaching courses in independent subject compartments, lessons are well rounded, project and inquiry based, with a focus on interdisciplinary learning. STEM education prepares students to explore and advance in their chosen STEM related career pathway to ensure they are college and career ready. Education is no longer about memorizing facts. STEM is about learning how to think critically, evaluate information, apply knowledge, and problem- solve to compete in the 21st century workforce.

Clean Energy Instructors

Annie Johnson
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Guidance Counselors

Wanda Randall - NMB, GSF, LHS, AHS, MBH
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Lacey Gordon - CFHS, CHS, SHS, SJHS
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Administration

Kelly Wilson - Principal
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Mariah Reiss– Assistant Principal
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Environmental Engineering



**The Academy for
the Arts, Science,
and Technology**

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www.horrycountyschools.net**

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What is Environmental Engineering?

The Environmental Engineering program enables students to apply fundamental science and operating principles of clean energy systems to authentic problems. Such problems involve motors and generators, photovoltaic systems, water and energy conservation, wind turbines, biofuel generation, bioreactors, water power, energy harvesting, fuel cells and nuclear power. Students use an engineering design process to develop solutions to these authentic problems.

Major Courses

Course 1: Clean Energy Systems

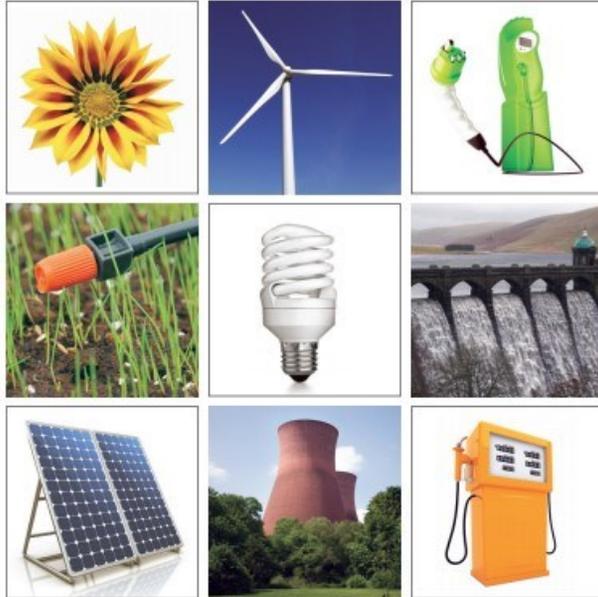
This course exposes students to three sources of renewable energy: wind, solar and biofuels. Students apply physics, geography, chemistry, biology, geometry, algebra and engineering fundamentals.

Course 2: Clean Energy Applications

The applications course introduces nuclear power, steam generation, fuel cells, geothermal power, and water power. Students will engage in a variety of hands-on design projects to demonstrate principals using advanced technology hardware and software.

Opportunities

- Industry Standard certifications
- Local and Community mentors
- Innovation and research
- Field Experiences



Course 3: Clean Energy Strategies

The strategies course involves hands-on projects that will require students to address specific issues related to providing portable power in any situation, developing new energy storage systems, increasing the efficiency of the modern home, and designing more energy efficient buildings and homes.

Course 4: Clean Energy Innovations

This course will provide students the opportunity to work independently with open-ended, problem-solving scenarios to create an original solution in the area of clean energy entrepreneurship or clean energy research and development.

Sample Innovative Projects

- **Solar Panel Design:** How can we develop a simplified solar technology and assembly process to increase its potential use by underdeveloped countries?
- **Wind Turbine Design:** How do we determine which aspects of the blade design will provide the greatest increase in efficiency to a wind turbine?
- **Geothermal Energy:** How can we extract heat from the Earth to cool and heat homes?
- **Carbon Negative:** How can we minimize our carbon emissions by utilizing waste biomass to provide heat and power?