



## ALABAMA ACADEMY OF SCIENCE, INC

### Alabama Academy of Science (AAS) Position Statement for the Alabama Science in Motion (ASIM) Program

#### AAS Recommendation for ASIM Funding for 2018 and the future

On February 22, 2017, the AAS Executive Committee voted unanimously to recommend the Alabama State Department of Education continue support for ASIM for the coming year and to include it in the State Department of Education strategic planning initiatives for the future. We urge the State Legislature to restore funding to Alabama Science in Motion for the 2018 budget year. We respectfully request State School Superintendent Michael Sentance's full consideration for expansion of this program to be included in the strategic planning initiatives underway.

ASIM provides crucial hands-on science education and teacher development using high-tech equipment made accessible to students across the state. Science specialists produce thousands of hours of teacher education in active learning classroom strategies. This program supports students preparing for the state's science competitions. Alabama Science in Motion is integral to Alabama's future!

If further information is needed, please contact us.

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The following is supportive documentation for the continued, if not enhanced, funding of the ASIM program by the State Department of Education.

**ASIM is a nationally recognized, cost-effective program with demonstrated outcomes for students across the state**

ASIM, developed in 1994 by the state legislature, is a program which enhances classroom practices, provides teacher development, and gives teachers access to scientific equipment across all geographic areas of the state. Eleven in-service centers at state universities house the program and 33 educational specialists provide teacher training in scientific inquiry and scientific methods. Three mobile vans in each of the 11 centers travel to schools across the regions providing high-tech equipment for hands-on science activities that could not be funded otherwise. The program began with a few pilot schools and expanded each year to have now served 97% of all schools in Alabama. ASIM specialists logged over 26,000 impact days with 1050 teachers in 132 school systems in the '15-'16 school year alone. Imagine the student impact this program has had over the past 21 years!

Each year ASIM places tens of millions of dollars' worth of equipment in schools across the whole state—rural and urban. This equipment includes spectrophotometers, gel electrophoresis apparatus, DNA replicators, SPARK Learning Systems, graphing calculators, and others. The SPARK Science Learning System is an all-in-one mobile device that integrates science concepts with inquiry-based processes. It allows students to analyze and conduct hands-on science activities based on 21<sup>st</sup> century methods and processes. Physics, chemistry, and biology specialists provide teacher development to facilitate student usage of this equipment. The annual budget of ASIM has been \$3.7 million per year (with \$2.1 million of those funds coming from the Alabama Science, Math, and Technology Initiative (AMSTI)). This demonstrates a significant return on investment well above costs.

The ASIM program was nationally recognized by the Center for Excellence in Education as an “exemplary laboratory model for STEM Education” during the National Lab Skills Symposium.

**ASIM supports students' engagement with science competitions**

The Alabama Academy of Science is the parent organization sponsoring the Alabama State Science Fairs, Alabama Science Olympiad, Alabama Science Paper Reading, Alabama Junior Academy of Science (AJAS), Junior Science and Humanities Symposium (JSHS), Alabama Science Scholar Search, and Gorgas Scholarship Competition. The Gorgas Scholarship Competition for high school seniors, AJAS/JSJS Paper Reading, and Science Fairs provide significant scholarship

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opportunities for students to attend Alabama colleges and universities. These outstanding students have gone above curricular requirements to conduct individual scientific projects. The availability of hands-on inquiry based science through ASIM has made many of these projects possible and provided the science training possibilities for these students.

In 2012, ASIM began a partnership with AJAS to support 11 local science paper reading competitions for high school students. The ASIM high school specialists in biology, chemistry, and physics, collaborated with the Alabama Academy of Science senior scientists to host local competitions in 11 colleges and universities (ASIM partner sites) across the state. These partnerships resulted in a 400% increase in the number of participating students and schools. The participating students have engaged in independent scientific inquiry through mentoring by teacher-sponsors supported in part by the ASIM program. Students participating in these competitions are eligible for thousands of dollars in scholarships to Alabama colleges and universities. Without these programs, Alabama students will not have as many opportunities to engage in scientific inquiry in and outside of school. And, there will be fewer opportunities for scientific preparation, scientific competitions, and eligibility for these scholarships.

According to Eugene Omasta, PhD, Professor Emeritus of Physics, Troy University, long-time State Counselor of the Alabama Junior Academy of Science program and former Physics Specialist of ASIM, ASIM is a revolutionary program that has delivered quality lab supplies to Alabama high schools at an efficient cost for the past 20 years. This program helps provide the laboratory background, guidance and equipment for students to conduct their projects and science. ASIM is the network that provides the facilities for competition and the source of judges and mentors at its 11 University locations in Alabama. For students competing in the State, regional, and/or national Science Olympiad competitions, ASIM helps those students effectively prepare.

Stan Hart, a retired science specialist with ASIM at UAB states, "Imagine if every public high school had thousands of dollars' worth of high-tech equipment available to educate their science students. With Alabama Science in Motion they have access to that and much, much more! The true gem in the state education's system is Alabama Science in Motion (ASIM). Schools in Alabama, except in the most affluent systems, had a problem providing science laboratory experiences individually. Since the advent of ASIM in 1994, science teachers have had the availability of science laboratory resources comparable to the most affluent states in the country. The cost to the state to fund every school with laboratory equipment provided by ASIM would be in the tens of millions of dollars. ASIM provides laboratory experiences for a fraction of that cost. The thirty-three Science in Motion specialists housed at public colleges/universities in Alabama are each certified to teach their discipline and veterans of the classroom. They serve as unique resources to our science teachers and may also teach during classroom visits. Science in Motion provides high-tech laboratory experiences for students and effective professional development for teachers in approximately 96% of the 400 public high schools in Alabama. Shared equipment through Science in Motion offers equally enriching opportunities to students from small rural to large urban schools. Professional development

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workshops improve teacher mastery of subject matter and equipment use and provide them with network opportunities with peers for sharing both content knowledge and teaching techniques. ASIM is a sound investment in our Alabama students' futures."

Respectfully,

A handwritten signature in black ink that reads "Ketia Shumaker". The script is fluid and cursive, with the first letters of each word being capitalized and prominent.

Ketia Shumaker, Ph.D.

President, Alabama Academy of Science (2017-2018)