

**A Resolution
by The Ohio Academy of Science**

**RESEARCH EXPERIENCE REQUIRED FOR EDUCATION
OF SECONDARY SCHOOL SCIENCE TEACHERS**

- WHEREAS, the improvement of science education and the enhancement of society's understanding and appreciation of science in order to create a more informed citizenry are responsibilities of the Ohio Academy of Science (OAS); and
- WHEREAS, scientific knowledge is gained through a deductive and intuitive method of investigation based on continuous experimentation, observation, and measurement inspiring evolving explanations of natural phenomena, among educators and those they influence; and
- WHEREAS, the ability to accurately teach science and the nature of scientific knowledge is obtained not only by being aware of the nature of science, but by gaining further awareness of research fundamentals through experience; and
- WHEREAS, many science educators in Ohio's secondary schools do not have research experience, and therefore may not be able to adequately teach students about the fundamentals of science and of the scientific process; and
- WHEREAS, we expect music teachers to have firsthand knowledge of those instruments they teach and coaches to have playing experience in their respective sports; and
- WHEREAS, while classroom based study and inquiry may provide a familiarization with the basic instruments of scientific endeavor, meaningful scientific research experiences that foster a greater appreciation and understanding of principles through hands-on experience can be found throughout society in the form of corporate and governmental studies and investigations; and
- WHEREAS, to the Academy, a research experience means a continuous, multi-week immersion into the given field. This may take the form of an internship or employment in an academic, governmental or industrial environment dedicated to research. This may include laboratory, product development, manufacturing, or supervised field work where the primary objective is to acquire new information or knowledge so as to test a hypothesis and/or solve a business, governmental, or industrial problem or need.
- THEREFORE, BE IT RESOLVED, that the Academy asserts that in order to improve science education, secondary school science educators need to have meaningful research experience in order to more completely and accurately teach students about the nature and practice of science. To this end the public will be better prepared to understand science and scientific issues in a society where science is increasingly playing larger roles in our daily lives; and
- BE IT FURTHER RESOLVED THAT, the OAS believes certification requirements for science educators should be revised to require meaningful research experience, and that colleges and universities should require students pursuing degrees in science education to obtain this research experience for the completion of their degree program.