

Preface

Whether you are at a land-grant institution with an articulated mission to translate research to the public or your child's second grade class is studying butterfly development, there are a whole host of reasons to get involved in public education about science. University expectations for promotion and tenure and recent mandates from federal agencies are requiring that scientists engage the public in a meaningful way. Yet, most scientists receive little if any preparation about how to do this. The programs, tools, and resources featured in this monograph will assist scientists and scientists-in-training in enhancing public awareness and understanding of science and considering its applications and implications. In addition, this monograph will respond to the call for outreach training put forth by Dr. Alan Leshner, CEO of the American Association for the Advancement of Science and *Science Magazine*, by addressing the notion that public engagement goes beyond enhancing the layperson's comprehension of science to engaging in real and meaningful dialogue about public "concerns and what specific scientific findings mean."

In writing this monograph, I have made a number of choices regarding the breadth and depth of the topics I have addressed. First, I have focused most of the discussion and examples on outreach and engagement with the K-12 community. Partnerships among students, teachers, and scientists are my area of interest and expertise. I was best able to draw on my experiences and those of my colleagues by concentrating on research and strategies from this arena. In addition, through conversations with informal and non-formal educators, I have learned that many of the lessons learned from K-12 outreach and engagement are applicable in their work.

Second, I intentionally chose to feature in-depth examples from individuals with whom I have personal connections, many from my own institution. At first glance, this may seem nepotistic, as there are excellent K-12 outreach and engagement activities happening across the country and around the world. Rather, my intention was to demonstrate that many grassroots efforts are borne at any single institution and your own colleagues and friends are likely to be exceptional sources of ideas and advice. In addition, many teachers and scientists are collaborating on worthy efforts to enhance science learning, yet the only way to learn about their endeavors is through word-of-mouth. As the field of K-12 outreach and engagement proliferates,

it is incumbent upon all of us to present and publish our work. Thanks to the following individuals, who were willing to do so in this venue:

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