Supporting Classroom Learning through AZA-Accredited Zoos and Aquariums

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AZA-accredited zoos and aquariums are unique venues for students to engage in problem-solving and critical thinking, with important opportunities for real-life applications. Like museums, science centers, and nature centers, AZA-accredited zoos and aquariums primarily use informal education as a means of engaging learners of all ages. Informal education is an approach to teaching that values interest and engagement over specific concepts and skills, leading to motivation and persistence on the part of the learner.

We know that Americans spend only 5% of the time they are awake in school. Outside of school time comprises the other 95%. (Falk, J. and L. Dierking, 2010). As outdoor classrooms and living laboratories, where interdisciplinary presentation of information is inherent to education programming, AZA-accredited zoos and aquariums are ideal places to launch life-long learners.

AZA-accredited zoos and aquariums have robust education programs staffed by trained and experienced educators who are familiar with formal education standards. These educators follow the latest trends, teaching techniques and changes to local, state, and national standards for education and ensure that the zoo/aquarium’s education materials and programs are aligned to those standards, as appropriate. Approximately one-fifth of AZA-accredited facilities have worked with their state Departments of Education on developing Environmental Literacy Plans. AZA members played a role in the development of the Next Generation Science Standards (NGSS), helping to shape those standards that relate specifically to topics covered in zoo/aquarium education, including adaptations, habitats, the environment, ecosystems, life cycles, evolution, climate change, conservation and stewardship, and other biological and physiological concepts.

The fields of science, technology, engineering and mathematics (STEM) are integrated and readily incorporated into zoo and aquarium education programs and materials to reinforce classroom learning. President Barack Obama has declared we need to increase student achievement in mathematics and science and expand STEM education and career opportunities to underrepresented groups, including women. In a speech at the National Academies of Science in April 2013, Obama said, “Reaffirming and strengthening America’s role as the world’s engine of scientific discovery and technological innovation is essential to meeting the challenges of this century. That’s why I am committed to making the improvement of STEM education over the next decade a national priority.” AZA-accredited aquariums and zoos provide access to unparalleled educational resources for addressing scientific literacy. At an accredited zoo or aquarium, students are challenged to use inquiry-based learning to develop an understanding of the natural world.
Zoos and aquariums are also ideal learning environments for introducing and exploring non-science standards, including concepts from the Common Core. Interdisciplinary presentation of information is inherent to education programming at aquariums and zoos. Reading, math, art, and many other disciplines can be fostered using zoo and aquarium exhibits, using the natural fascination for animals to attract students’ attention.

Students with special needs, especially those with ADD, ADHD and some on the autism spectrum, often thrive in the unique learning environment provided by an aquarium or zoo. Zoo and aquarium educators are accustomed to working with children with special needs and welcome the opportunity to collaborate with classroom teachers to provide powerful learning experience for all students.

Being authentic science institutions, aquariums and zoos connect students to citizen science projects, partnering students with scientists to answer real-world questions. Citizen science not only helps to develop students’ science skills but also contributes to actual data for the science community and for the general public.

U.S. Secretary of Education Arne Duncan notes, “Public and school libraries as well as museums, science centers and zoos, are trusted, welcoming places where children can make discoveries, deepen interests, and connect their natural curiosity to the wider world – developing the skills they need for a lifetime of learning.” (IMLS 2013; bold emphasis added.) AZA-accredited aquariums and zoos are vital partners with formal school classrooms. Together we can provide enriching learning experiences and foster lifelong learning.

References


National Academies of Sciences. Remarks by the President on the 150th Anniversary of the National Academy of Sciences. April 2013.