

Authentic Field Experiences K-12

Managing for Success in Outdoor Learning

Science learning experiences occur in the classroom, in the laboratory, and in the field. In these experiences, students discover facts, concepts, and laws of science for themselves, much as scientists do in their professional lives. Experiences that extend from the classroom into the field allow students to explore, observe, and investigate things in the natural world that cannot be brought into the classroom learning environment.

The Texas Essential Knowledge and Skills for Science require teachers at all grade levels to be provided with a wide range of materials and instruments for facilitating student investigations. They also require that the secondary level, a minimum of 40% of instructional time must be spent in laboratory and field investigations. At the elementary grades, districts are encouraged to facilitate classroom and outdoor investigations for 50-80% of instructional time.

Direct observations in a field setting provide a stimulating and rewarding experience for the students and the teacher.

Managing for Success Notes for Teachers

You are an educational expert no matter the location, indoors and outdoors. Knowing the answers is not mandatory. Here are some tips for success when organizing your outdoor experience.

- 1) Visit and evaluate your lesson site
- 2) Prepare a parent letter – modification of field trip parent letter (appendix D of Texas Education Agency Texas Safety Standards)
- 3) Set expectations
 - a. Behavior-“leave it better than you found it”, how will I get their attention, where will we meet – just like in the classroom.
 - b. Academic
- 4) Establish routines for going outside. For example, prepare a tool bag/materials that routinely go outside (clipboard, notebook pencil), and have a system for going in and out of the building. Some teachers go out a different door than they would for recess or dismissal. Have a set meeting space outside for discussion.
- 5) Use best practices, just like you would in the classroom. You are the facilitator of learning, no matter the location. Consider using the 5E model of instruction. Ask guiding questions and engage all students
- 6) Keep first experiences simple
- 7) Be actively engaged yourself. Become a guide/explorer/learner. You don't know all the answers and that's okay. Encourage students to be investigators and discover the answers for themselves. Use essential/guiding questions, such as “How do you know? What is your data?”

- 8) Allow students to explore for approximately 5 minutes at the beginning of an investigation and then ask them, “What one item did you see that you think no one else saw?” This initial exploration helps students in “getting the wiggles/excitement out.”
- 9) Embrace nature’s lessons and use “teachable moments” – just as you would in the classroom.
- 10) Equip Field Kits, which can be backpack, a plastic bag, or a messenger bag with safety vests with Pocket Calipers. The pocket caliper can measure three dimensions of an object, (inside, outside, and depth). Consider holding a backpack drive to get a set of field kits. Both teacher and the students should have a field kit – (the teacher should carry a first aid kit and a list of allergies/inhalers)
- 11) Develop a safety plan for the outdoors. Be prepared with the following information:
 - a. Common skin irritating plants/insects/etc.
 - b. Weather – in case of severe weather plan, water/sunscreen/repellent
 - c. Boundaries – traffic, property lines, off limits, pathways in and out of the school or field site
 - d. Buddy system
 - e. Clothing – what to wear
- 12) Plan Instructional Time –
 - a. Travel time
 - b. Instructions
 - c. Investigation time
 - d. Wrap-up
 - e. Classroom follow up

Resources for more detailed information

Texas Education Agency’s Texas Safety Standards K-12, Appendix E Checklists and Guides

Finally, enjoy and learn yourself!