Using Simulations for Instructional Purposes

An educational simulation is an instructional activity that models aspects of the real world to teach one or more concepts. Simulations—especially those that involve students in kinesthetic learning experiences—are used frequently in Project WILD.

In the *Project WILD Aquatic K-12 Curriculum and Activity Guide*, "Hooks and Ladders," a salmon simulation, and "Migration Headache," an activity about limiting factors affecting populations of migrating water birds, are examples. In conducting simulations for instructional purposes, you must remember that the activity can take on a life of its own. The students can become so involved in the role they are playing that they forget to relate the objects, events, and processes to what they represent in nature.

Students of all ages may tend to become competitive when they are responsible for capturing or escaping the animals depicted in an activity. Antic and energetic physical behavior often results. During such activity, the students identify subjectively with the role they are playing. This identification is important and should be encouraged as part of the powerful learning that is possible through simulations. Yet it also is important to link the subjective experience with the objective concepts that are central to each activity.

Distinguish between what is realistic and what is not realistic about the simulation. Simulations, by definition, are simple representations of more complex natural interactions. Teachers should point this out to students and help them understand how the simulation is like and unlike the real situation.

Simulations always leave out some elements that exist in nature. They simplify to make a point. Make sure that the students are clear about the point and the limitations of the activity in demonstrating the complexities of real-world situations.