Effectiveness of the modified field trip curriculum: Teaching the importance of good conservation habits

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Internship for Science-Practice Integration

Changing for the Better

With global warming issues, finite resources and an increase in population growth, it is imperative for children to learn the importance of changing their behavior to live more sustainably. As an intern and teaching assistant at the Nina Mason Pulliam Rio Salado Audubon Center, I helped develop and improve the current 3rd-7th grade field trip curriculum for field trip events at the center that happen multiple times a week.

The field trip, Water Changing Journey, consists of three activities:

• macroinvertebrates and water quality,
• a bird/nature walk,
• the bone box (animal pelts and skulls teaching about desert wildlife).

As a sustainability student, I thought it would be beneficial to add information to the curriculum that would help children gain an awareness of the impacts our behavior has on the environment and how modified behavior and thoughtful green building design can conserve resources and strengthen the environment.

Surveying

In 5 field trips, I surveyed 129 students, including 40 students in the 6th grade and 79 in the 4th grade. Of the 79 students in 4th grade, one group of 38 was tested without the curriculum modifications. The surveys were handed out at the end of each field trip, one to each student and another to the teachers to see what prior knowledge the kids had been taught about conservation in school. The pie charts (figures 1, 2, & 3) show how the 91 students who completed all the new activities answered each of these three questions:

1. Why is the quality of the water important for the health of wildlife?

   • "activities I can do are recycling and turn off lights when not being used"
   • "I will clean trash around the neighborhood"
   • "pretend to be an animal"
   • "if the water was polluted the animals would die"
   • "to keep us alive and healthy"
   • "I don’t remember"

2. What activities can you do at home to be more conservation minded and environmentally friendly?

   • "Don’t litter, and walk or ride a bike to not pollute the air"
   • "yes, I will try to help the plants and animals stay alive"
   • "feed animals"

3. Is there something you will do to help the environment, if so, what?

   • "activities I can do are recycling and turn off lights when not being used"

Figure 1

Figure 2

Figure 3

Modifications appear Successful

There are two important lessons learned from the data collected.

Results indicate:

In figures 1, 2, and 3, the results show the students could effectively answer the three survey questions used to assess their understanding of some of the educational insights the Audubon Center wants the kids to learn from the field trip.

Figure 4 indicates that the field trip modifications proved to be beneficial to the students’ abilities to answer the three field trip questions, as they were more likely to better answer the questions after a field trip with the included modifications.

To get a better understanding of the impact of the lessons on the students, it would have been useful to have them take a pre-test to get their baseline knowledge of these concepts before coming to the Audubon Center. In this case, I only had information from the teachers on what they thought their students knew about conservation. Another limitation of the study was I only had information from the teachers on what they thought their students knew about conservation.