# 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:

•macroinvertibrates and water quality,

•a bird/nature walk,

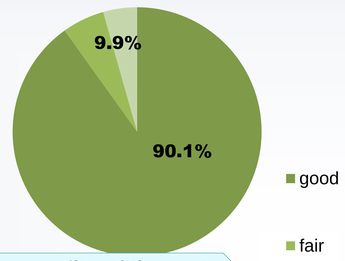
•the bone box (animal pelts and skulls teaching about desert wildlife).

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:

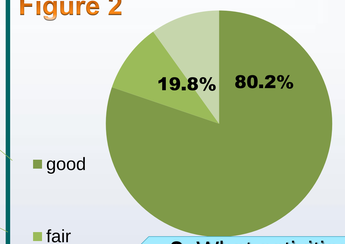
**Figure 1**




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

- Example of a "**good**" answer: • "if the water was polluted the animals would die"
- Example of a "**fair**" answer: • "to keep us alive and healthy"
- Example of a "**poor**" answer: • "I don't remember"

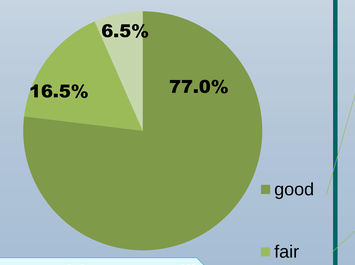
**Figure 2**




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

- Example of a "**good**" answer: • "activities I can do are recycling and turn off lights when not being used"
- Example of a "**fair**" answer: • "I will clean trash around the neighborhood"
- Example of a "**poor**" answer: • "pretend to be an animal "

**Figure 3**




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

- Example of a "**good**" answer: • "Don't litter, and walk or ride a bike to not pollute the air"
- Example of a "**fair**" answer: • "yes, I will try to help the plants and animals stay alive"
- Example of a "**poor**" answer: • "feed animals"

**Better answers for the 4th graders on the modified field trip**

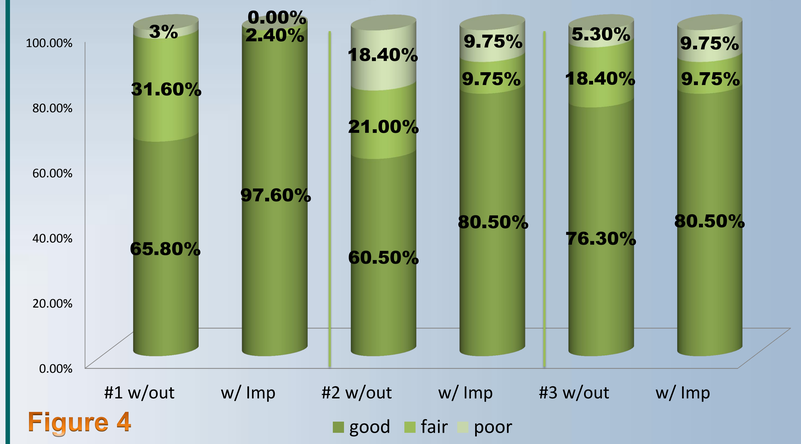



**Figure 4**

Above shows a comparison of 4th graders who took the survey without field trip improvements (w/out) and another group of 4th graders who went on the modified field trip (w/ Imp).

Bird & Nature Walk

Audubon Center

## Modifications Include:

•**Discussion of the green features of the Audubon Center** - Implemented into the bone box lecture, used to educate the students on water and energy efficiency, as well as, renewable energy technology.

•**Green Living Game** – Also implemented into the bone box lecture, used to engage students in critical thinking about conservation habits to help sustain the environment.

•**Scavenger hunt** – Added to the bird/nature walk, used to provide hands-on learning of locating animal homes, trash that will destroy those habitats, water and food sources for animals, and water conservation techniques.

## 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 survey 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 interpreting and categorizing the student responses.

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