

64 contact with rats and snakes had on children's attitudes towards those animals

*improved feelings about that animal*

how they felt when seeing the target animal and 2) invited them to describe it by circling simple adjectives.

### Conducting the Surveys

Two weeks prior to the zoo presentation, teachers that had signed up for the Northwest-themed programs were invited via email to participate in this study. All nine classrooms that were approached agreed to participate. Teachers administered a pre-survey to the students a week prior to the zoo program. Zoo staff administered an identical post-survey immediately after the program. For all surveys, students were told their participation was optional and were instructed not to include their names.

The same zoo educator presented identical programs to participating classes with the only variable being which animal was touched and which was seen but not touched. Students were invited, but not required, to touch an animal. Zoo staff removed the surveys of students who chose not to touch an animal from the analysis.

### Results

#### Response Rate

Nine classrooms from three different schools participated in these surveys. A total of 399 surveys were completed with 200 pre-surveys and 199 post-surveys. The rat and snake data were analyzed separately resulting in 200 pre-surveys and 199 post-surveys for rats and 199 and 196 respectively for snakes. The number of pre- and post-surveys differ due to indecipherable answers and one student who chose not to touch the snake; these surveys were removed from the analysis. While the pre-survey conditions established the baseline, the post-surveys measured variable conditions: four of the classrooms touched either the rat (N=45) or the snake (N=74).

#### Rat Results: "Seeing a rat makes me feel..."

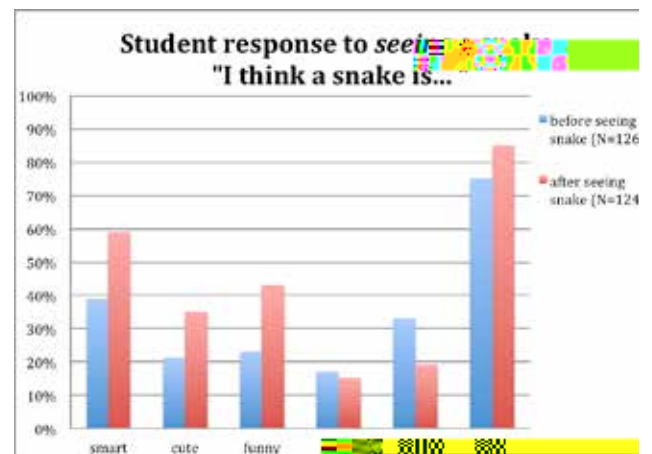
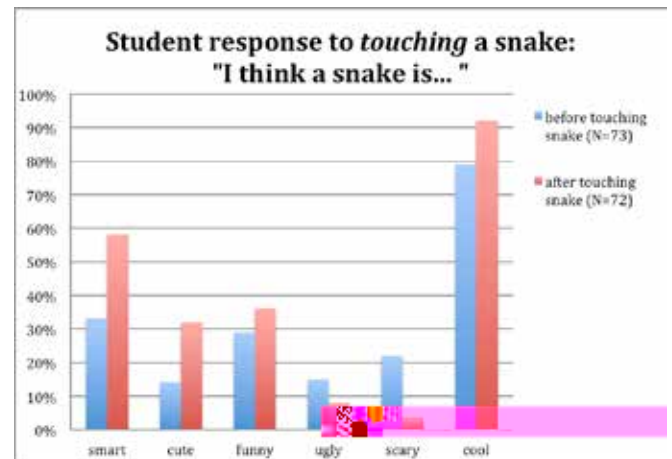
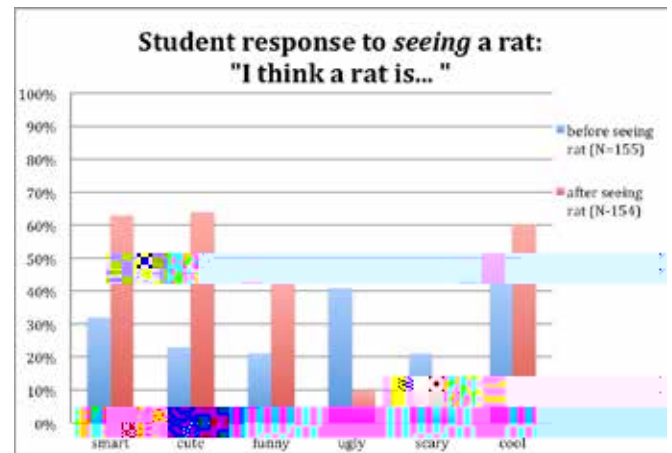
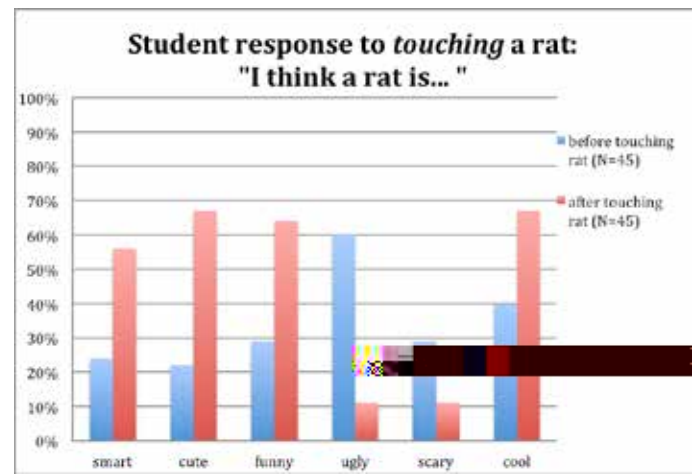
After seeing or touching an animal, students responded to the prompt: "Seeing a rat makes me feel..." by circling a happy, neutral, or unhappy face. Survey answers were assigned a value: 1 = happy, 2 = neutral, 3 = unhappy. Two classrooms (N=45) saw and touched a rat and seven classrooms (N=154) saw a rat but did not touch it. In both cases, students' attitudes toward rats improved after seeing or touching the rat. The changes were statistically significant, revealed p-values lower than 0.05.

#### Snake Results: "Seeing a snake makes me feel..."

Three classrooms (N=72) saw and touched a snake and six classrooms (N=124) saw a snake but did not touch it. In both cases, students' attitudes toward snakes improved after seeing or touching the snake. The changes were statistically significant, revealed p-values lower than 0.05.

#### Seeing One but Touching the Other

Three of the classes that saw (but did not touch) a rat did get to touch a snake. Conversely, two of the classes that saw (but did not touch) a snake did get to touch a rat. In addition to being lumped together in the above analysis, these classrooms were also analyzed separately to





for different species and different individuals at which point they seem to become more stressed. Further program animal welfare evaluations such as these, alongside educational impact studies, will help zoos better utilize and care for their program animals.

### **Conclusion**

As children grow up in a society that is increasingly disconnected from nature, zoos are in a unique position to make a difference. By providing children with positive and meaningful animal encounters, zoos can have a profound impact on children's attitudes and the future of environmental conservation. This study offers evidence that seeing and touching animals improves attitudes towards those animals, supporting the value of program animals in zoo education. While more studies are needed, these results, combined with the awe in children's faces when they touch an animal, are enough validation for this zoo educator to continue providing this stimulating experience.

### **Acknowledgements**