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Ernst & Young Entrepreneur Of the Year Winner

# EVALUATION OF MAD SCIENCE®: SUMMARY OF KEY FINDINGS

## Background:

In the fall of 2005, The Mad Science Group® commissioned an evaluation study with Char Associates, an independent research group in Montpelier, Vermont, to assess the educational impact of Mad Science on school children in the United States.

This national study examined whether exposure to Mad Science positively affects children's interest in, and understanding of, science, as compared to children who have not had exposure to Mad Science.

## Methodology:

The educational impact of Mad Science on school children was assessed by selecting a random sample of third grade students (n = 470) representing four regions across the United States. Classrooms within each region were randomly assigned by the evaluation team to either "Experimental" (Mad Science) or "Comparison" (Non-Mad Science) groups. All Mad Science (experimental) classrooms received two 60-minute science presentations focusing on space science. All classrooms (experimental and comparison) were administered pre-test and post-test student surveys assessing students' science content knowledge related to space science, and attitudes towards science. The post-test was administered to the experimental group approximately one week following the second Mad Science visit. Analysis of the surveys involved both quantitative and qualitative data analysis.

## Summary of Key Findings:

### 1. INCREASED SCIENCE CONTENT KNOWLEDGE

Students who participated in Mad Science showed significant change in their science content knowledge in space-related science on average, with an increase from 46% correct at pre-test to 65% correct post-test, a 19% increase in score. In contrast, comparison group students showed very little change in their science content knowledge with a slight increase from 47% to 50% on average, a 3% gain in performance. The difference in pre to post-test gains between groups was found to be statistically significant.

## 2. INCREASED INTEREST IN SCIENCE

Students participating in Mad Science reported greater interest in space-related science after participation, with an increase from 21.6% who reported high interest in their pre-tests to 32.2% post-test. Comparison group students reported no change in their level of interest (22.3% pre and post).

## 3. INCREASED ATTITUDE THAT SCIENCE IS "FUN"

A significantly higher percentage of students who participated in Mad Science reported a change in their attitudes that "science is fun" after their experience (70% at pre-test to 83% post-test.) In contrast, comparison group students reported minimal change (67% at pre-test to 68% post-test).

## 4. INCREASED INTEREST IN SCIENCE IN LOW AND MODERATE INTEREST STUDENTS

39% of students with a low interest in science prior to exposure to Mad Science experienced an increase in their level of interest in science to either moderate or high after experiencing Mad Science.

29% of students with a moderate level of interest in science prior to exposure to Mad Science experienced an increase in their level of interest in science to high after experiencing Mad Science.

### Further Details:

For more information about this educational study, please contact:

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