Averaging and Captive Wildlife

by Bill DeRosa and Patty A. Finch

Startling Statistics

Intermediate and Junior High and High School Grades

Startling Statistics is a teaching technique that will make dry statistics come alive for your students. At the same time, it will help you teach students about computing the mean, median, and range, while providing practice in reading and visualizing large numbers. The activity (also known as Startling Statements) has been one of the most popular and frequently used activities of the nationwide math motivation workshop Equals, aimed at overcoming math avoidance among young women.

We are happy to introduce this technique to you via our special version titled Captivating Facts.

The Lesson: Captivating Facts

• Overview: In this activity, each student will have a trivia question about captive wildlife pinned to his or her back. Each student will ask five other students to answer the trivia question. Each trivia question can be answered with a number. When a student has received five answers, he or she averages the numbers to come up with one average answer. Later, you reveal the true answer. Usually the answer will be a “startling statistic!”

• Background: Each year literally hundreds of thousands of animals and thousands of pet owners suffer the consequences of inappropriate pet choices. For the animal that has managed to survive the cruelty of capture and transportation, the new domestic environment can mean only further stress and suffering. Many people do not realize that wild animals have complex needs that are difficult if not impossible to meet in a home environment. Choosing to keep a wild animal as a pet can cause human suffering as well. Guilt, disappointment, frustration, financial expense, and, unfortunately, disease, injury, and even death can result.

• Preparation: Prepare signs or cards to pin or hang on your students’ backs. Each card should have one of the questions listed below. (Note: Each question can appear on more than one card. For younger students you may want to focus on only four or five questions per session.) Also prepare for later use one set of large cards with the correct answer to each question. Be sure to include the question number.

• Activity: 1. Tell students that you will be hanging (or pinning) a trivia question on each one’s back. Each will then ask five students to (a) silently read the trivia question and (b) give an answer aloud. Thus, the whole class will be up and walking around, reading questions on one another’s backs and giving answers!
2. Establish some rules: (a) no one in to know what question is on his/her back; (b) it is OK to make a wild guess when answering a trivia question...no one knows all the answers; (c) it is OK to answer the same question more than once; (d) each student is to ask only five students to answer the trivia question on his/her back; (e) each is to write down the five answers received and then each can take off his/her sign and read it!

3. After all students have had a good time getting five answers to the trivia questions on their backs and have had a chance to take off and read their signs, instruct them to average the five answers they received and be ready to report to the class the following: the range (the difference between the highest and lowest answers they received); the mean (the average of the answers); and the median (the figure midway between the highest and lowest answers). You may also want students to report the actual highest and lowest answers they received.

4. After all students have finished their calculations, the fun resumes! Call out each question number. All students who had that question on their backs must stand up. Ask one of the standing students to read the question aloud. Then each student student reports the range, mean, and median that they received in response to the question. The class may then average the means to come up with a group average.

5. Then hold up the answer card! Students are sometimes "starred" when they see the correct answer. A lively discussion may ensue! Sources for the answers may be shared as well as other background information you may have on hand. The activity is sure to generate some interest in the problems inherent in the captive wildlife pet trade.

After all the questions and answers have been shared, the activity can be used to:

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2. Enjoyable. Students are sure to want to design their own startling statistics.
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