



CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s) Samantha M. Williams	Project Number S0228
Project Title You Guess the Weight	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this project is to see that if weight tape is used to measure and thus #weigh# both Caprine & Ovine species, if that #weight# read on the tape is the same as the weight from an accurate livestock scale. Livestock scales cost in excess of \$ 1,300.00, where as livestock #weight tape# costs less than \$ 10.00. Thus the question is the reliability and accuracy of the low cost weight tape. Animals recorded will be of varying sex and age. Tests will be run on both Caprine and Ovine market species.</p> <p>Methods/Materials First thing is to clean and calibrate the certified livestock scale. On paper, create a data table that lists the animal#s identification, sex, and age on the top of the table. Then put the first animal into the scale either Caprine market species or ovine market species. Record the ear tag number, sex, age and the weight from the scale. Remove that same animal from scale and then measure its weight from the Nasco Caprine/Ovine weight tape. Record weight tape reading from the heart girth onto the data table. Repeat for additional Caprine and ovine species.</p> <p>Results The results of the project showed that the use of #weight tape# is an acceptable substitute for the weighing of both Caprine and Ovine species under most circumstances. The results did however show that with Ovine species, when the animal#s weight exceeded 100 pounds, results were unreliable at best. Results also show no difference in the sexes.</p> <p>Conclusions/Discussion The hypothesis was partially correct. For species Caprine, the tape measurements compared to the actual weight very closely with a R² value of .97. For species Ovine, the overall comparisons of measurements taken had an R² value of .78. However the R² value for the measurements taken on Ovine#s less than 100 pounds was .97 matching that of species Caprine. Therefore, the conclusion is that when using the weight tape for species Ovine, only those animals below 100 pounds can an assurance of confidence of the measurement is believed.</p>	
Summary Statement A comparison of weight tape and a calibrated scale to measure the acutal weight of Caprine or Ovine market species.	
Help Received Dad cut the board.	