CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
S0205

Project Title
Saddle Sore: The Pressure War

Abstract

Objectives/Goals
This project was designed to prove whether a certain types of English saddles are better for a horses back by distributing the riders weight most evenly, and if so, which ones are best.

Methods/Materials
Methods
1.Cut pressure sensitive paper to size and shape of saddle panles
2.Tape pressure paper to saddle panels to prevent paper from slipping
3.Place saddle on horses back and sit for ten seconds.
4.Remove carbon paper layer from pressure paper so as to reveal results
5.Repeat these steps with all twelve saddles reccord and compare results.

Materials
1.Three dressage saddles
2.Three multi-purpose saddles
3.Three close-contact saddles
4.Three air filled saddlees
5.Pressure gauge
6. One square inch metal disc
7.Transparent graphing paper
8.Sharpies
9. Rubbing alcohol
10.Fifteen sheets of 28cmx48cm pressurex sensor film
11.One horse
12.One rider

Results
Air sadles created the least amount of pressure points, followed by the close-contact saddles, then the multi-purpose saddles and finally the dressage saddles, which actually created the most pressure points.

Conclusions/Discussion
The air in the panels of the air saddles moved away from pressure creating an even contact over the horses back. The close contact saddles are light weight and designed to allow the horse to jump (move in vertical direction) as well as doing lateral work (move in horizontal movement). The designer of this saddle

Summary Statement
This project explores the weight distribution and pressure points created on a horse's back by different saddles.

Help Received
Neighbor helped find the most effective way to construct our graphs. Iron Horse Saddlery and Calabasas Saddlery supplied saddles we tested. A friend supplied the pressure gauge.