

Name _____
Period _____
Date _____

MODEL AIRPLANES PROBLEM

1. What is the problem in the story?
2. What could the students have done to research their problem?
3. What was the variable?
4. What were the groups that were tested (the experimental groups)?
5. What could the students' hypothesis have been?
6. How did they perform their experiment?
7. What results did they obtain?
8. What was their conclusion?
9. How did they communicate their results?



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EPISODES



Model Airplanes by Ryan and Alex

We fly model stunt planes. There are many models available and we wanted to know which plane features allow for the best stunts. Our question: How does wing shape affect the plane's performance?

What did we do?

We picked out two planes with different wing shapes. The first plane had a flat-bottomed wing, which was curved on top but flat on the bottom. The second plane had a symmetrical wing, which was curved both on top and on the bottom. We decided to try three stunt maneuvers with each plane: an aileron roll, a snap roll and an inverted loop. Alex flew the planes and we both judged how well the plane completed the maneuvers, using a rating scale of zero to three. A rating of zero meant the plane couldn't complete the maneuver, while a three meant it completed the maneuver excellently.

What did we find out?

Even though the flat-bottomed wing shape is most common, it did not perform stunts well. This plane only scored a two on the aileron roll, a one on the snap roll and couldn't complete the inverted loop, earning a score of zero. The symmetrical wing, on the other hand, performed each stunt beautifully, earning a three on each stunt. We concluded that the air flowed more smoothly over the symmetrical wing, even when the plane was tipped upside down, making it the better wing shape for stunts.