

# Airbags



# Testing an Airbag for a Self Driving Car

Directions: During this experiment, you and your partner will use each object twice to test your airbag. One partner will hold the object and the other partner will hold the airbag. The first time, you will apply force to the balloon slowly (a slow crash), and the second time you will apply force quickly (hard crash) to observe what happens to the airbag. As you test, fill in the chart to help you keep track of your results.

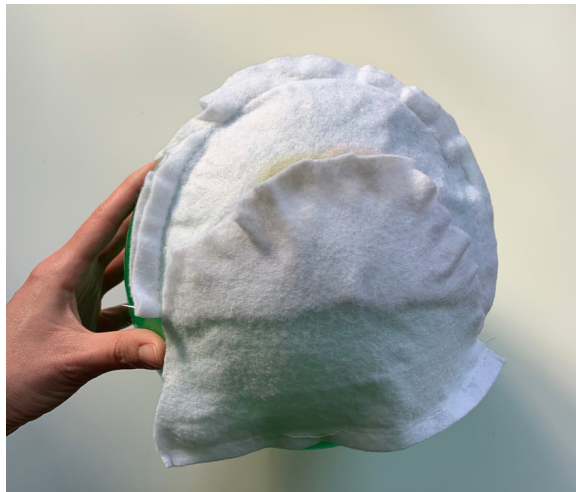
Object	Slow Test	Fast Test
<b>Eraser</b>	Did the balloon pop? (Circle one) Yes   No Other Observations:	Did the balloon pop? (Circle one) Yes   No Other Observations:
<b>Paperclip</b>	Did the balloon pop? (Circle one) Yes   No Other Observations:	Did the balloon pop? (Circle one) Yes   No Other Observations:
<b>Pen</b>	Did the balloon pop? (Circle one) Yes   No Other Observations:	Did the balloon pop? (Circle one) Yes   No Other Observations:

**Caution!**  
**Airbag Testing Zone**



# Teacher Page: Airbag Examples

Students should create an airbag made from a balloon. The goal is to have an impact area on the balloon that protects the balloon from popping upon impact. The covering should also be soft enough to not harm a person that collided with the bag.



Example 1: Balloon with cloth scraps glued to it.



Example 2: Balloon with styrofoam bowl and yarn scraps glued to it.