

Collision is all around us!



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Objective

To build a vehicle that can withstand a collision; to apply your knowledge of force and speed

Materials



paper



scissors



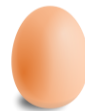
cardboard wheels



straw



a plastic egg ("crash test dummy"),



a raw egg ("live passenger")



glue

Other materials you might use to build your car. You will also need something to act as a ramp, a stopwatch and a wall or hard object to collide your vehicle into

Instructions

Your task is to design a vehicle that can withstand a collision at a decent rate of speed, while keeping your passengers (egg) safe. Once your vehicle is assembled, you will test it down a ramp with a collision into a wall or another hard object, using the plastic egg as the crash test dummy.

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Do you think you need to make any adjustments to your design?

What went wrong?

What worked well?

When you are ready, you will test your vehicle again. This time, you will use the “real” passenger, the raw egg. Once you release the vehicle down the ramp, your body may make no contact with it. What happened to the egg after the collision?

Can you test it a second time? Collect your data, recording the rate at which the vehicle moved each time you released it down the ramp as well as any observations to the vehicle and to the passenger.

Speed	Observations to the vehicle and to the passenger