

TART MA KART

Style and Safety

You have probably seen TV shows where an ordinary car is fitted with an amazing body kit and a fancy stereo before being given a stunning paint job.

- Your group's task is to take an ordinary physics trolley and fit it with a bumper or crumple zone to make it safer in a collision. You can make it stylish, but safety is more important!
- You will be given a choice of materials plus card and sticky tape.
- Your design must be able to be fixed to the front of the test trolley with Blu-Tac.
- It should not add more than 2 cm to the length of your trolley.
- It must not have a large effect on the performance of the trolley.
- Your design will be tested. The test will measure the deceleration of the vehicle in a head-on collision.

Do you think a large or small deceleration will be best in a collision? (Should the change of speed in the collision happen quickly or slowly?)



The Big Idea: 1

The trolley is like the passenger safety cell of a modern car. It is not supposed to be badly damaged in a crash.

Useful Links

<http://www.euroncap.com>

<http://www.rospa.com/roadsafety/advice/motorvehicles/index.htm>



The Big Idea: 2

The safety cell is surrounded by bodywork and materials that deform during a collision.