

## Water Splash Study

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### Summary

We researched The change in the mass of the water splash due to the change in the mass of the car. We found that there is the peak of the mass of the water splash.

### Research Background and Objectives

Looking at water splash in everyday life, we wondered that the mass of water splash differs standard cars from trucks, so we reserched this issue.



### Method

In Experiment 1, a car model was driven down on a slope, and had the car run over the puddle. After that, we measured the mass of the water splashed with the syringe. In Experiment 2, the height of starting point was changed, and the speed of car was measured.

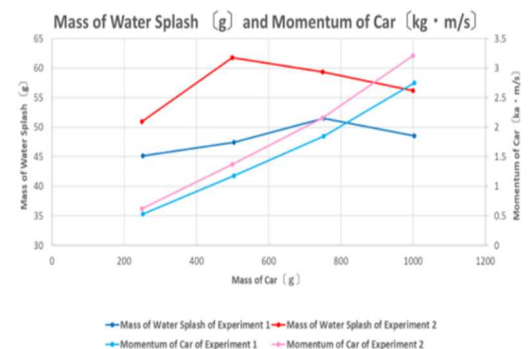
### Result

Experiment 1:

The mass of water splash peaked at car mass of 750g and the mass of water splash was decreased thereafter.

Experiment 2:

The mass of water splash peaked at car mass of 500g and decreased thereafter.



### Consideration

There existed a momentum of the car at which the mass of the water splash peaks, and the closer the car gets to that point, the greater the water splash is.

### Conclusion

By reducing the speed of the car or retreating the car as far away as possible from the momentum at which the mass of water splash peaks, water splash will be reduced.

### Keyword

Physics, Puddle, Water splash, Car, Center of Gravity