



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Hee Soo Angela Jang	Project Number S0314
Project Title The Science of Traffic	
Abstract Objectives/Goals To find the reason behind traffic and solve traffic congestions. Methods/Materials Procedures: <ol style="list-style-type: none">1. I built the endless round road by connecting the electric magnetic rail pieces.2. I connected the two engines to the road instead of one, because the electricity has to be strong enough to move the 5 model cars.3. I spaced the 5 model cars equally and started the engines, to observe the pattern of detonation waves. Materials: Electric Magnetic Rail Pieces 5 Model Magnetic Model Cars 2 Rail Engines 6 D Batteries 2 Controllers Results The 5 model cars on the road all have different speeds, because the detonation waves are caused by the different and inconstant speeds of each of the cars. After the engine is started, the cars start to go and eventually all get clumped together, even when the force of the engines are equally distributed along the road. Conclusions/Discussion The reason of the longer time, traffic, is the inconstant speeds of the cars as shown in the results. In order to eliminate traffic from our roads, we need to have all cars go at equal and constant speeds. The cause of unequal and inconstant speeds is because humans control the speeds of each car; humans are not robots that are able to keep an exact speed. The solution to this is to have robot cars with equal mass that will have each car go at a constant speed, and also have cars go at perfectly equal speeds to each other.	
Summary Statement My goal was to find the reason behind traffic and solve it.	
Help Received Mother helped glue paper on board.	