**Activity List**

**Name:** Kaiying Hou (English Name: Kevin)

**Genda:** Male **Age:** 16

**Current School:** Phillips Academy Andover

**Current Grade:** Grade 10

**Activities in High School**

* **MIT PRIMES.** In January 2017, I was admitted by MIT PRIMES, a year-long prestigious math research program organized by MIT Mathematics Department in which high school students work on real research project under the guidance of mentors from MIT. The research project I am working on is mathematically modelling the traffic flow with a mix of human and autonomous drivers, of which the main focus is to find out how to describe a real-world system (a road or highway with human and autonomous drivers) mathematically, and then use mathematics to predict or explain something interesting about the real system.
* **Graph Theory Research**. Under the guidance of my mentor Mr. Lynch, a doctor candidate of MIT, I am doing research about the hardness of finding the Hamiltonian paths in semi-regular tessellations. I work independently during the week and have a meeting with Mr. Lynch each weekend. A paper about it will be finished this year.
* **Gobi Desert Voyage.** In the summer of 2016, under the guidance of instructor from West Point, I traversed the Gobi Desert by walking 83 kilometers. I improved my leadership and endurance in this activity.
* **Hobbies.** I play clarinet in the school band and also play piano. I am also a tennis lover.

**Activities in Middle School**

* **Club Founder.** In March 2013, I founded the Yaohua Environment Protection Club in my school, and was elected as the head of the club.
* **LED Lighting Experiment.** In May 2014, I initiated and conducted an experiment regarding the energy-saving effect and economic efficiency of using LED lighting in classrooms. With all the findings, I published a paper on the *China Science and Technology* magazine and won a national-level prize awarded by *China Youth Development Foundation*. All these things I did attracted attention from the public, and I was interviewed and reported by CCTV(China Central Television).
* **Air Quality Measuring & Sharing.** From 2014 to 2015, to minimize the harm of the air pollution to students, my teammates and I monitor the air quality of our campus and send the measured PM2.5 readings to students by mobile social network apps. With this useful information, students know whether it is a good day for outdoor activities or not.
* **Ant Studies.** I put lots of efforts in studying ant colony. In the environment protection exhibition hall set up by WWF (World Wild Fund for Nature) in Shenzhen, I took charge of the ant demonstration zone. The demonstration of ant colony’s life and behavior were well-received by viewers and awarded by WWF.