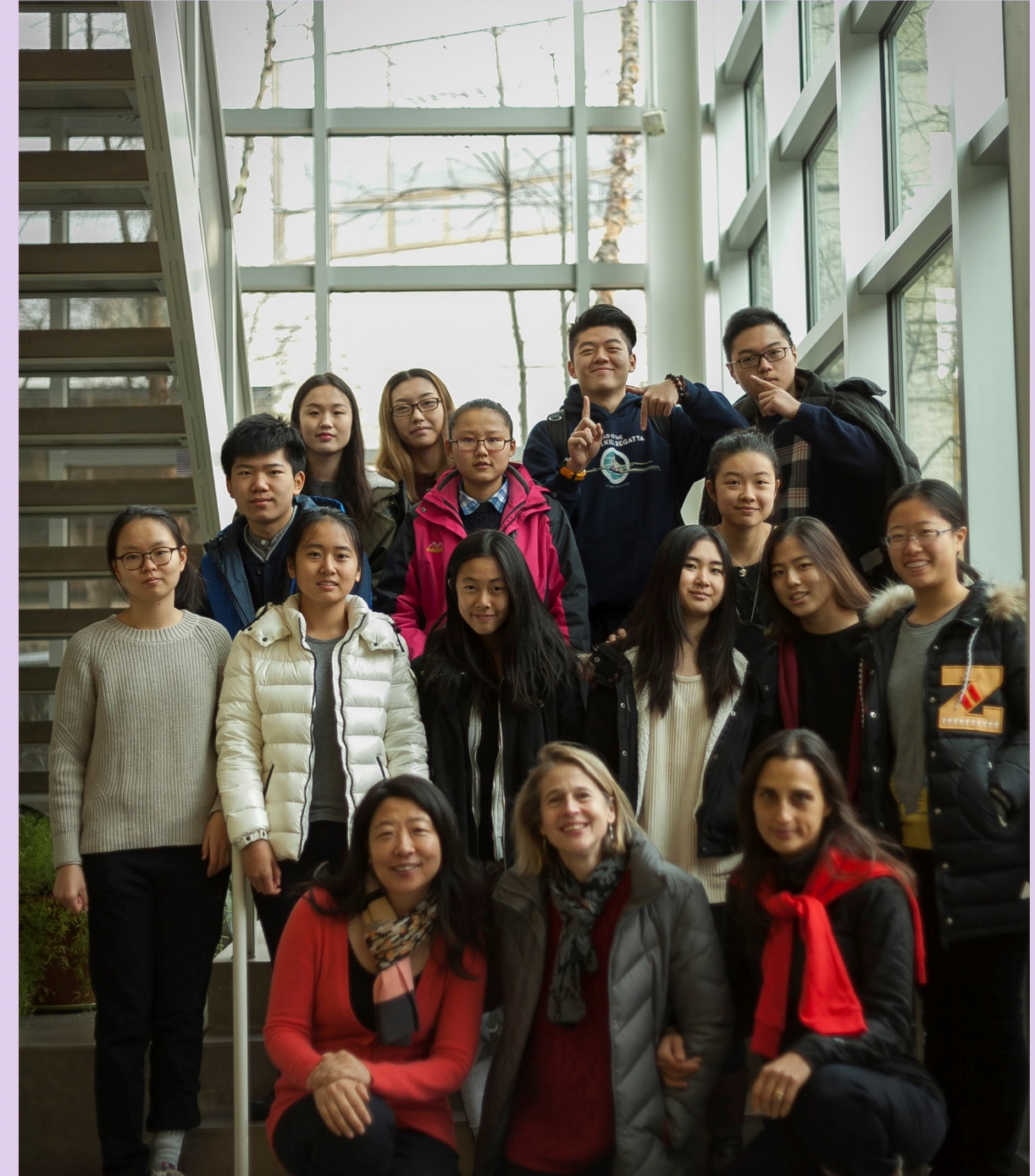




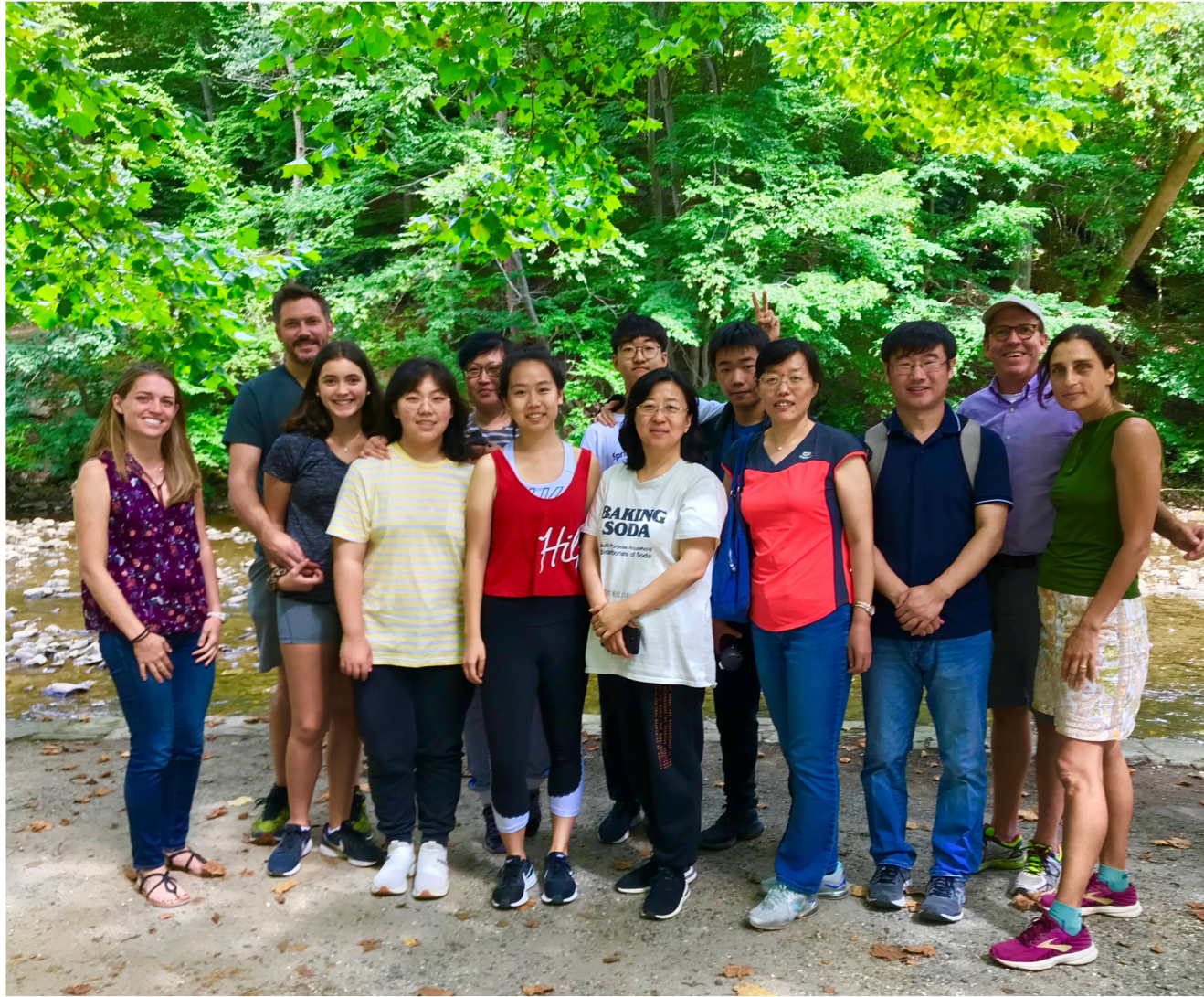
**A Year in the Life of the International
Student Program at Germantown
Friends School**



**A Year in the Life of the International
Student Program at Germantown
Friends School**



















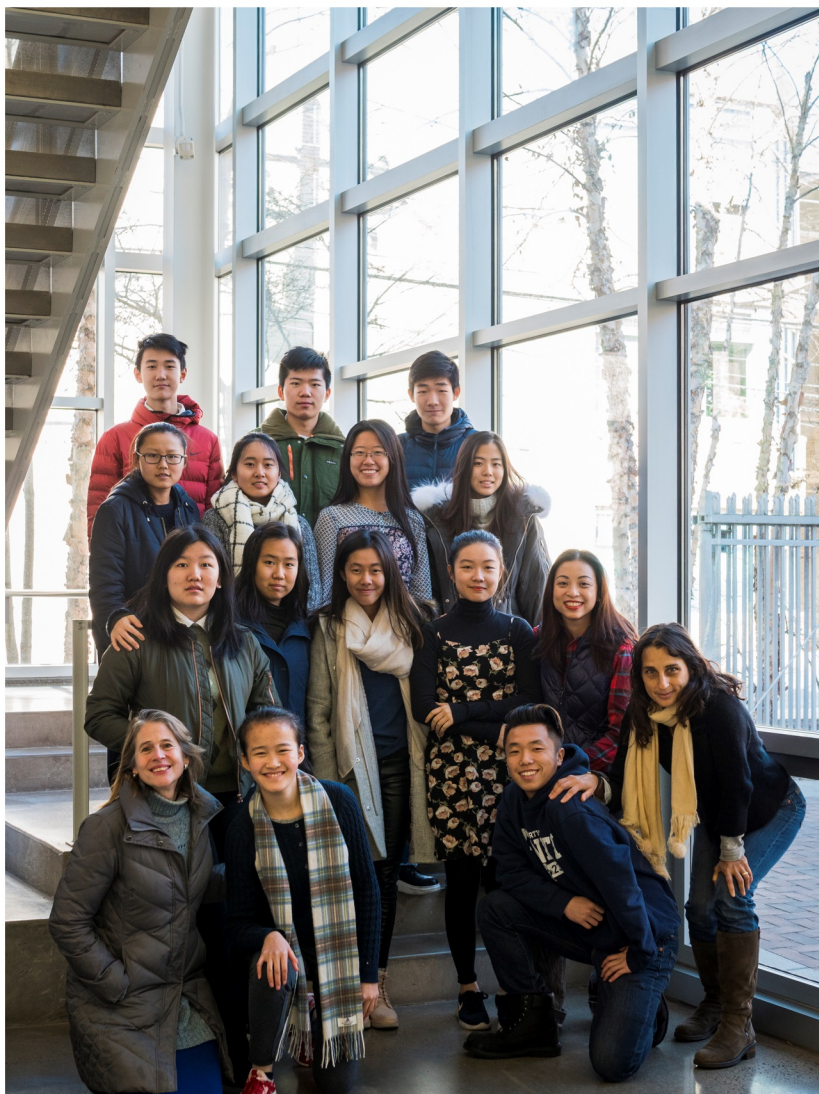


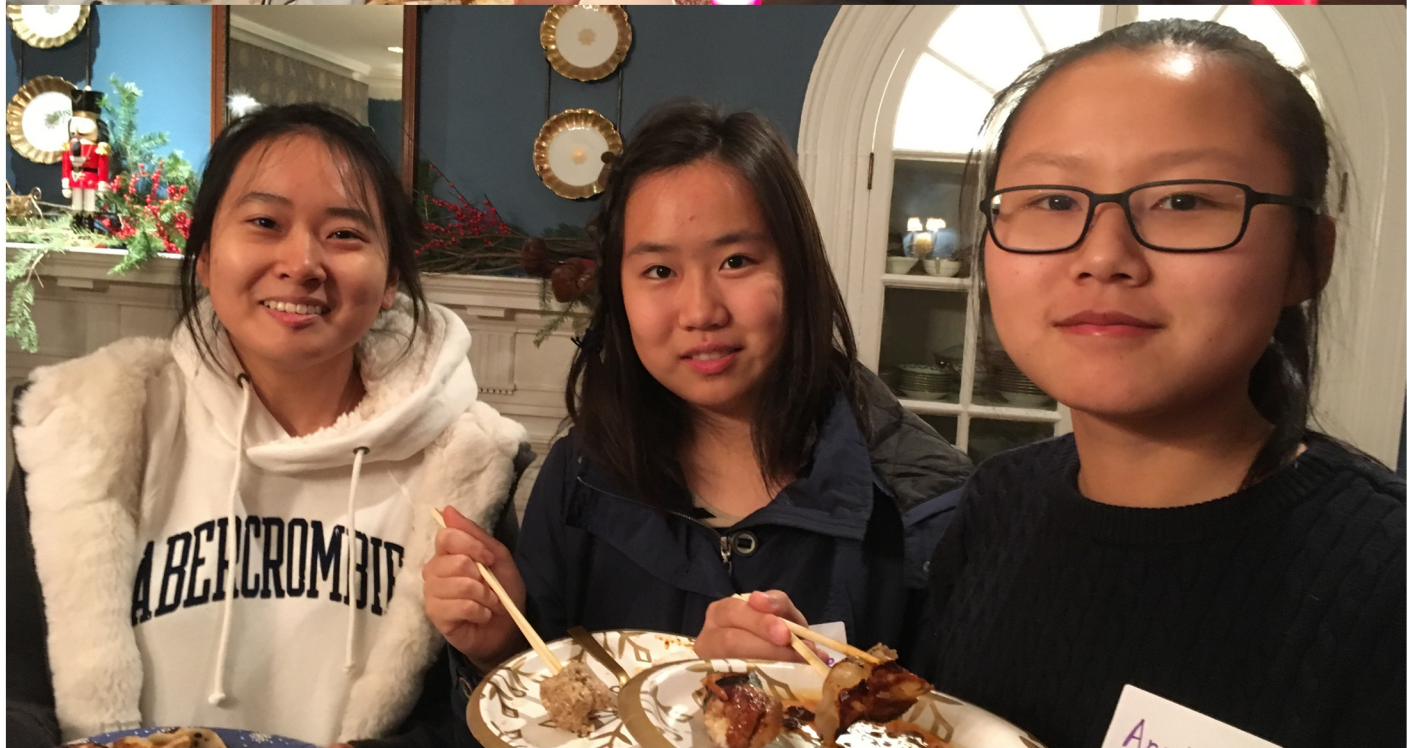




















ION KNOW

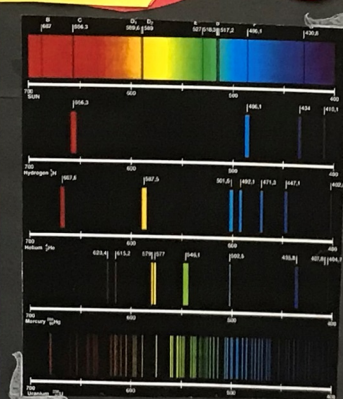
Henry

Natalie

Fergus

Know your...
CHEMICAL HAZARDS

DO NOT INHALE FUMES
OR DUSTS OR MISTS



Deadly Definitions

What are ions?

Charged atoms are ions:

1. Cation ['kætəɪən]
 - a. Positively charged
 - b. Form by losing electrons
 - c. Smaller than the atoms
2. Anion ['æniən]
 - a. Negatively charged
 - b. Form by gaining electrons
 - c. Bigger than the atoms

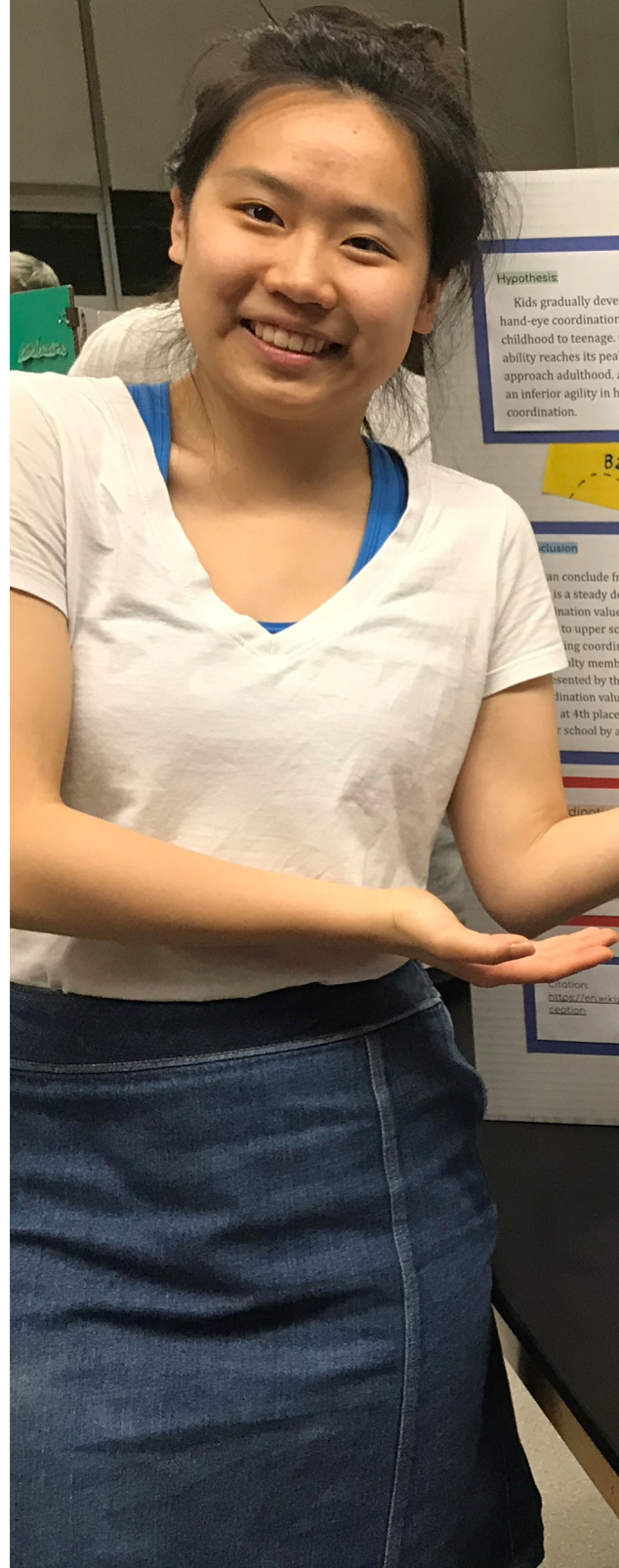
Ions in the Real World

IONOSPHERE
The ionosphere is a layer of the Earth's atmosphere that contains a high concentration of ions and free electrons. It is located between the mesosphere and the thermosphere. The ionosphere is responsible for reflecting radio waves back to the Earth, which is why we can receive radio signals from distant stations. It is also responsible for the aurora borealis, which is a natural light display in the sky.

IONOSPHERIC SCATTERING
Ionospheric scattering is a technique used to detect and track objects in the sky. It involves sending a radio signal into the ionosphere, which reflects off the ionized layer and back to the ground. This technique is used by the military and for civilian purposes, such as tracking aircraft and ships.

IONOSPHERIC ABSORPTION
Ionospheric absorption is a process where radio waves are absorbed by the ionosphere. This occurs when the frequency of the radio wave is low enough to be absorbed by the ions in the ionosphere. This is why low-frequency radio waves are not able to travel long distances.





HAND EYE COORDINATION

Hypothesis

Kids gradually develop their hand-eye coordination from early childhood to teenage. Coordination ability reaches its peak as teenagers approach adulthood. Adults exhibit an inferior ability in hand-eye coordination.

Bzzzzzzzz

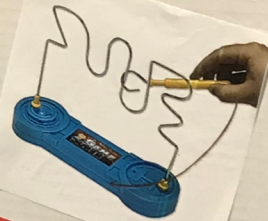
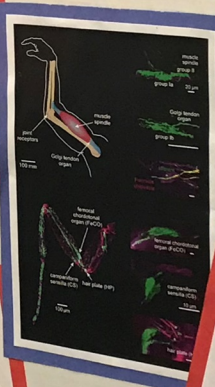
Conclusion

We can conclude from our data that there is a steady decreasing trend in coordination value from lower school to upper school, therefore an inferior coordination capability. The ability members are represented by the highest coordination value which leaves at 4th place, defeated by the upper school by a small margin.

What are we doing?

Hand-eye coordination is the coordinated control of eye movement with hand movement and the processing of visual input to guide reaching and grasping along with the use of proprioception—the ability to guide the

In hand-eye coordination, the afferent nerves carry signals to the brain from sensory signals of the eye. The brain then sends out efferent nerve signals, also called motor nerves, which are involved in muscular control.



Game set & rules

In the "Don't Buzz The Wire" game, the participant needs to hold a metal stick with a hook at the top end and trace the winding wire from one end to the other. If the hook touches the wire, the machine will buzz once.

When playing the game, the participant's hand shall remain at the end of the stick. However, each individual is allowed to use one hand or both hands and put their arm on the table or above the table as long as they feel comfortable.

Data and graph

We invited a 3rd grade class and a 6th grade class to help us out with collecting data. We walked around Upper school campus and tested it on 10 juniors and 10 teachers. One practice round was allowed. As they attempt to trace the loop across the wire without making contact, we counted the amount of buzzes they made and the time required to complete the loop.

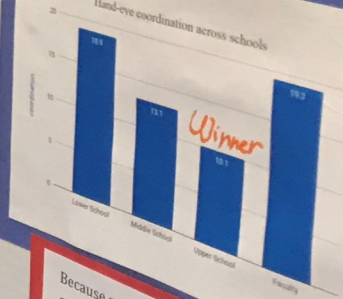
Once we obtain the data for time (in seconds) and the amount of buzzes, we use a simple formula to calculate a value that represents the person's coordination ability. We:

---convert the time from seconds to minutes.

---find the product of time (in minutes) and the amount of buzzes

That is: $C = t \times b$

Hand-eye coordination across schools



Because a more superior coordination capability is represented by a shorter time duration one spends on one loop and a lower amount of buzzes one makes in one loop, the LOWER the coordination value is, the BETTER the coordination capability.

