April 21, 2020

Dear Parents,

I hope everyone is doing well and staying healthy. We have done a wonderful job as a community increasing our technology use for continued learning and now I am happy to share how we are using technology to help fight COVID-19. Please share this information with your children!

Stanford University developed a distributed computer program to find cures and treatments for diseases and viruses around the world including cancer, heart disease, Parkinson's, Alzheimer's, and Ebola. The program, called Folding @ Home simulates the dynamics of COVID-19 proteins to hunt for new therapeutic opportunities.

The program harnesses unused computer processing power from thousands of participants from around the globe in a combined processing power twice the processing power as the world's largest super-computer. The Folding @ Home program efficiently utilizes the donated resources to test entry points into the virus proteins and then runs algorithms and simulations of treatments, vaccines, and cures. If a viable option is found, additional simulations are then run to find complications, contradictions, or side effects over the life of the treatment, not only ensuring the efficacy of a potential treatment, but also safe before conducting FDA testing. In the past, researchers have used standard servers and workstations to complete these same calculations and it has been calculated that Folding @ Home is able to process 1 million days of research in just 10 hours.

When we upgraded the network to support a 1:1 Chromebook program, we retired servers that were far past a productive life and not able to support the data or network speeds for our school. We did however keep those devices on hand for emergencies and to teach students about hardware in their technology classes. Shortly after we closed for distance learning, we discovered Stanford University shifted their research from a variety of diseases to utilizing all of their Folding @ Home computing power to find a COVID-19 treatment. Stanford sent out an all call to the tech community to grow their network, the more processing power, the faster they can find a treatment. Our IT company brought the opportunity to our attention and donated their time to help setup our unused resources to join the fight.

After the all call for help, Stanford University received a surge of processing power from all over the world, so much so that they have been able to bring in additional research labs and universities to expand their ability to simulate and collaborate with the rest of the scientific community. We are proud to offer some of our school's resources to help fight this global pandemic.

God Bless,

Corrine Buich
Principal