



STEMBoost Newsletter

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Rule Presentations (cont.) + Officer Application Deliberations

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The rule presentations for the Kennedy Science Olympiad teams, taught by the STEMBoost Officer Team, continued through October 17th, with events such as Solar System, Disease Detectives, Rocks & Minerals, Ornithology, Anatomy & Physiology, Ping Pong Parachute, and Mission Possible being touched upon. We would like to acknowledge Joseph Lee, Aseem Rajopadhye, Angela Zhang, and Ashish Kashyap for running the October presentations.

The STEMBoost Officer Team is also closely working with the Board of Directors in processing the new officer applications for the 2021-2022 school year. We would like to thank everyone who submitted an application and will notify everyone about the results in the near future.

Fun Fact

How are children of identical twins related genetically? (See answer in the back)

COVID Booster Shots Approval

Angela Zhang

On September 24, booster shots of the Pfizer/BioNTech COVID vaccine were approved by the FDA after evidence emerged of the benefits of a booster shot, including increasing the immune response in patients exposed to COVID-19. However, this month, guidelines on who is eligible and who should receive one have continued to evolve. While booster shots were initially only recommended for immunocompromised or otherwise at-risk individuals, the CDC now recommends a booster shot from Pfizer/BioNTech or Moderna for all eligible seniors, adults with medical conditions or in long-term care facilities, and employees at a greater risk of being exposed to COVID-19, such as doctors. For the Johnson & Johnson vaccine, the CDC adopted looser guidelines, offering booster shots for all adults who received their initial vaccination over two months ago regardless of medical conditions. This was attributed to the lower efficacy of the J&J vaccine when compared to the Moderna and Pfizer/BioNTech vaccines.

Despite these recommendations, the CDC has made clear that the vaccines are still effective, pointing out that they still offer significant protection from adverse effects of COVID-19, and that this effectiveness is reduced but not eliminated over time. And those worried about the vaccine's potential side effects needn't worry; side effects of the booster shot, including pain at the injection site and fatigue, remain mild and similar to those of the initial shots. Cases of myocarditis and pericarditis, characterized by inflammation in the heart, continue to appear, especially in young males. However, the symptoms are rare and mild, typically resolving within one day of hospitalization.

In addition, the FDA approved "mix-and-match" of vaccines, meaning that individuals who received their first dose from one vaccine brand are now able to receive their booster shot from a different one. On top of these new

guidelines, the FDA is also considering authorizing the distribution of the Pfizer/BioNTech vaccine to children ages 5-11, a decision which is expected to be made after Halloween.

As the Bay Area, California, and the rest of the nation continue to fight the pandemic, we hope that eligible individuals will take this opportunity to protect themselves and receive a booster shot if possible.

Tin, Alexander. "Can I Get a COVID-19 Vaccine Booster Shot? Latest Guidelines for Recipients of Pfizer, Moderna and Johnson & Johnson." CBS News, CBS Interactive, 25 Oct. 2021, <https://www.cbsnews.com/news/covid-19-vaccine-booster-shots-pfizer-moderna-johnson-and-johnson/>.

Towey, Robert. "Covid Vaccine Boosters Are Now Available. Here's Who's Eligible for Pfizer, Moderna and J&J's Shots." CNBC, CNBC, 23 Oct. 2021, <https://www.cnbc.com/2021/10/23/covid-vaccine-boosters-are-now-available-heres-whos-eligible-for-pfizer-moderna-and-jjs-shots-.html>.

"Who Is Eligible for a COVID-19 Vaccine Booster Shot?" Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 22 Oct. 2021, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>.

Answer: he children of identical twins are genetically siblings rather than cousins? This is because they share 25% of their DNA. Full siblings share 50% of their DNA, half-siblings share 25%, and cousins share 12.5%. Thus, they are the genetic equivalent of half-siblings