

## **Pikes Peak Regional Science Fair 2020**

The Colorado Springs Branch once again awarded two female scientists for their efforts at the Pikes Regional Science Fair. AAUW recognized participants at both the senior high and middle school levels. Award winners were eight-grader, Ava Connelly, of The Classical Academy and sophomore, Kimberly Jones, of Miami-Yoder High School. The winners each received a \$25 gift certificate to Barnes and Noble.

Miss Connelly's experiment, entitled "Electricity-Free Emergency", investigated the best design criteria for keeping babies in incubators warm during a power outage. It has been shown that the chance of SIDS (Sudden Infant Death Syndrome) increases if premature babies are not kept at a safe, constant temperature. She investigated three types of "unplugged" heat sources: a USB hand warmer with rechargeable batteries and hand-crank, Hot Hands hand warmers, and a hot water bottle with a solar pack. She determined that the USB hand warmer was the only device to reach the incubator functional temperature range.

In "Phosphate Concentrate Change in the Colorado Arkansas River – 209 miles," Miss Jones investigated the phosphate concentrations present in the Arkansas River from Leadville, CO to Rocky Ford, CO. To accomplish this, a field study was conducted, and samples were taken randomly at three points along the 209-mile stretch. She proved her hypothesis that phosphate levels increased to unhealthy limits for both livestock and humans. In the future, she would like to compare to the Health Dept standards and narrow down where the major pollutants are actually introduced into the river.

It was very disappointing that there was only a total of 53 projects for the entire Fair; and, fewer than half were female. There were no girls in the high school engineering and physical sciences category. It would appear that Science Fairs may have run their course with STEM students who look to advance their skills in other competitions such as Science Olympiad, Math Counts, and First Robotics. Most fair participants are now looking for industry sponsors that can guide them to higher levels with relevant topics and more resources.

---*Brenda Wolfe*, Science Fair Chair