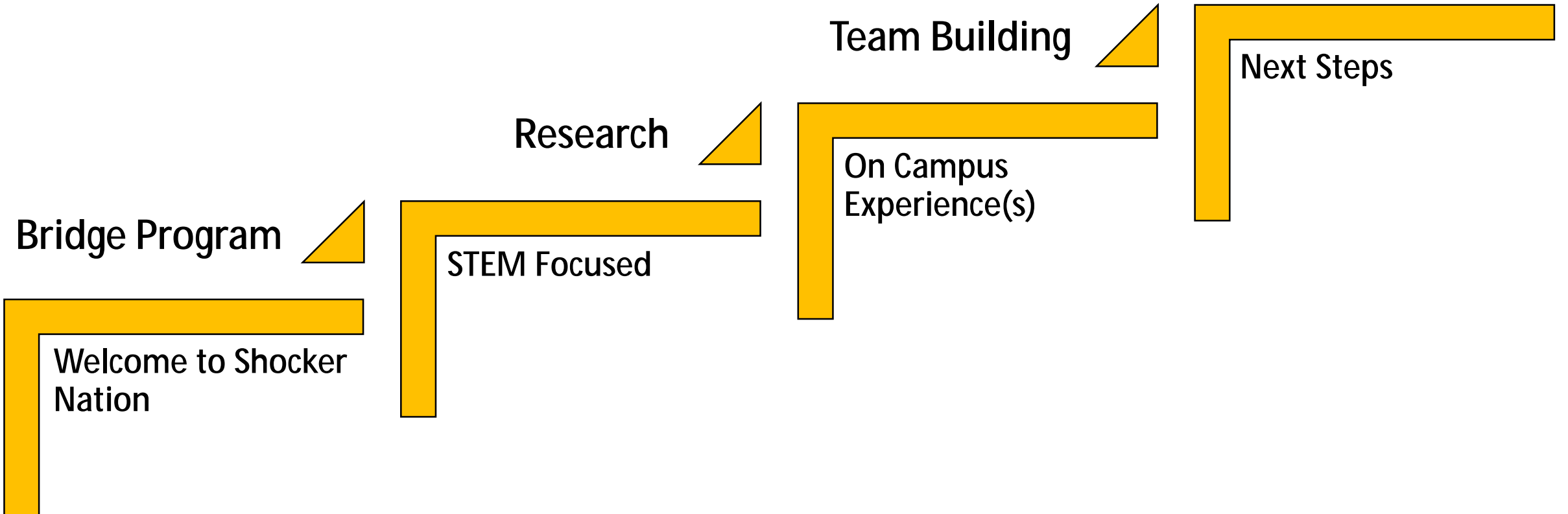
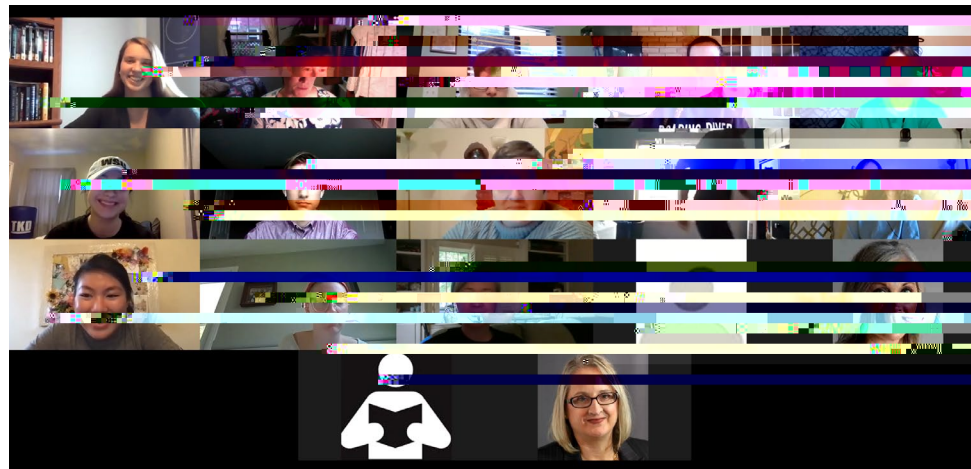
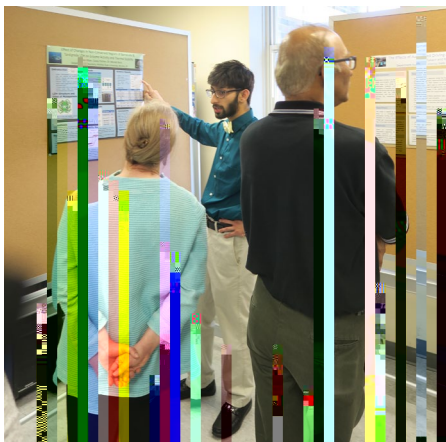


A Kansas Louis Stokes Alliance for Minority Participation sponsored by the National Science Foundation (NSF).





wsu Anna Tri, Dr. David Long
Wichita State University - Department of Biomedical Engineering

What is fetal bovine serum?
Fetal bovine serum (FBS) is a natural source of growth factors and hormones that promotes cell growth and proliferation, supplies essential nutrients, and provides a protective environment for cells in culture.

What are Endothelial Cells?
Endothelial cells form the inner lining of blood vessels. They act as an interface between blood and other tissues. Endothelial cells are unique due to their location and fulfill different functions depending on the location in the body.

Background & Introduction
Endothelial cells grow quickly and are found in all parts of the body. We hypothesize that the use of fetal bovine serum will increase endothelial cell growth and the rate at which it grows. Endothelial cells will proliferate and grow at a faster rate. We believe that this is due to the FBS providing hormone factors for cell growth and proliferation as well as supplying essential nutrients and other factors needed to maintain a favorable growth environment.

Results
Our study focused on 4 experimental groups with 10% FBS. The results concluded that the cells cultured with higher concentrations of FBS had more cells and essential nutrients.

Discussion & Conclusion
By understanding what amount of fetal bovine growth and proliferation, researchers are able to regenerate medicine. With further studies, using more endothelial cells, we can help support with regenerative medicine.

Acknowledgements
I would like to thank Dr. Long for his help and support with this project.

Figure 1 Endothelial cells lining the blood vessel (reference 2).
Figure 2 Endothelial cells that we used were isolated from 3-month-old fetal bovine serum. We cultured the cells in 24-well culture plates and placed them in a 37°C incubator. We used different concentrations of fetal bovine serum (0%, 10%, 20%, and 30%) to see how it affected the growth of the cells. The black circles indicate the wells that we used for each FBS concentration and the black circles indicate the wells that we used for each FBS concentration.

Figure 3 Endothelial cells maintained in 10% cell growth factor (10% FBS) endothelial cells after 4 days in culture. The number of live cells under a microscope and counted the number of live cells under a microscope.

Figure 4 Endothelial cells maintained in 10% cell growth factor (10% FBS) endothelial cells after 4 days in culture. The number of live cells under a microscope and counted the number of live cells under a microscope.

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