Tim Gower- Hidden River Cave- Authentic Data Integration

Two years ago (pre-Covid), the Caverna Middle School partnered with Hidden River Cave in Horse Cave. We had worked with different aspects of Environmental Science for this project. For example, the Hart County 4-H taught the class how to test soil, water and air quality. Then the meteorologist from WBKO talked to the students about weather data. In all, we had four different visits for instruction. Once instruction was completed, then the students were to be bussed to Hidden River cave to take samples, record observations and reading from various instruments.   We were going to take live samples reading from various locations and compare from inside the cave, outside the cave, and from a local weather station mounted at the school. We were only able to take one trip down to the cave to gather data because COVID ended the live classroom.

A.   Data Source: [Hidden River Cave data](#)

This year, I am in talks with Hidden River Cave again to possibly be allowed to finish the project that we had started two years ago. The plan was to allow the 6th grade classrooms to be the ones responsible for learning, recording and analyzing the data. This will be an ongoing project that will follow the group until they reach 8th grade. The data will be collected and once analyzed, shared with the National Cave Foundation. The data collection and analysis will be conducted during a unit on Weather and it will be followed with a unit about Planet Earth.

The data that will be collected will enhance learning by the students actually collecting the data and learning various ways to analyze, interpret and display the data. I believe that if the students are to be responsible for collecting the data, they will have

time and work vested in the data, and therefore, meaning much more to the students than data they can pull off the internet or from a book. I also am a believer that if the data comes from their community, it means much more to them. The data that will be collected will be sent off to the Cave Foundation for further analysis or even a possibility of being published in their journal. When the students find out that other people will read their work, I think it will increase their motivation to do well.

This lesson will reach across the curriculum in various forms. For starters, science will be used to understand what data is being collected and the tools used to collect the data. Then math skills will be needed to record the data, chart the data and analyze the data. ELA skills will be utilized because the students will have to use their writing skills to summarize their findings and be able to write an article using their data. Technology will be used for most of the project, from basic data recording to sharing their information with the foundation and community. As a culminating activity, the students would present their findings to the community in an open house that would be conducted by Hidden River Cave.

This project took almost 4 months to plan for the original project. We are in the process of talking and figuring out details for beginning this project in the spring. If everything works out, we will have plenty of data to analyze. I know that this might not be the "exact" data source you might be looking for, but this project will be used for many years to come. This project took many hours of planning and details for me to let it go.