

Honors Extension Assignments

Students who are interested in taking the Honors version of 9th-grade Earth and Environmental Science at Heritage High School are expected to complete a variety of critical thinking and extension activities throughout the course. At the beginning of the semester, students should complete two introductory extension assignments to show their understanding of the Honors-level expectations and interest in taking on this academic challenge.

(From the "Honors-level Opt-Out letter" provided to students on the first day of class)

The rigorous expectations of the Honors-level of Earth and Environmental Science will require students to complete and be successful on differentiated tests and quizzes as well as other daily assignments. Honors students will also complete a variety of additional extension assignments per unit, and some independent research and project work. *For example*, for our first unit – **"Introduction to the Earth"** – students will be expected to demonstrate mastery of all core course content **AND** complete the following extension assignments:

1. **Plan, carry out, and document an at-home experiment, including a digital product to show the procedure, data collected, results, and possible conclusions that can be drawn from these results.**
2. **Collect, analyze, and share at least three current News articles that represent different aspects of Earth and Environmental Science, how the Earth and its systems work, and important global environmental issues.**

These extension assignments should be completed and submitted to Mr. Edwards by _____.

For extension assignment #2 – "Current News articles":

- Use reliable media sources to find at least 3 News articles that relate to Earth and Environmental Science. These could be about natural events (like natural disasters, changes in the land or oceans, and even interesting weather patterns), important environmental problems and human impacts (like pollution, threats to living species, and Global Climate Change), observations and discoveries about the Earth from Space or through new research, and the ways we rely on natural resources (like oil, coal, or solar power, or designing cars that require less fuel or crops that require less water).
- Read your three articles carefully. You can highlight important sentences or words, or take notes on a separate piece of paper.
- Write a summary of each article on a loose sheet of notebook paper (about 3-5 sentences).
- If you find these articles online, print a copy and save the website so you can go back to it later. If you find these articles in print (like a newspaper or magazine), cut out the article or the pages it is printed on.
- Bring your three articles, your notes, and summaries to class to show Mr. Edwards on the specified due date.
- For more information about this assignment and how it connects to other work that students will complete throughout the semester, see the "Current Events and News Articles Scrapbook" project guide Mr. Edwards has shared during class.

For extension assignment #1 – “At-home experiment”:

- Start by asking a question about an everyday observation or problem you have observed. This question is your “purpose” (For example, “Which brand of paper towel is the most absorbent?”). Your purpose should be answerable in a short time frame and should include specific, measurable variables and controls.
- Create a step-by-step test (“procedure”) that allows you to measure and observe the variables mentioned in your purpose. Your procedure should require only everyday materials that you can easily access or find around your home. The procedure should clearly connect back to your purpose and have no serious safety concerns. Make sure you carry out more than one trial so you can compare results and try to eliminate the impact of random errors. (At least three trials is best.)
- Make sure you have a strategy for keeping your controls consistent in all of your trials. Make sure you know how you will measure your variables and collect organized data. Watch out for errors that can get in the way of your procedure and keep your work from being reliable.
- Take photos and video of you carrying out your procedure. (You’ll include these as evidence that you actually did the experiment yourself. It’s ok for other people to help you.)
- Collect quantitative and qualitative data as you carry out your step-by-step procedure. Your data should specifically focus on the variables mentioned in your purpose.
- “Process your data” in a way that helps you better understand it – Should you calculate averages based on your different trials? Should you organize your data into a graph or chart? Are there any outliers that seem to be unreliable or caused by errors? Organize your data so that it is easy to understand and communicate.
- Summarize your results by describing what happened during your procedure. Connect back to the quantitative and qualitative data you collected and the purpose of your procedure. Think about errors too – Were there things that happened that might have caused your work to be unreliable? What caused these errors? What were their impact on your data and results?
- Think about the “big idea” behind your procedure and how it connects back to your purpose. What can we learn or understand from the results? This is your conclusion. Explain it in a clear statement and a few details to support it.
- Document your work in a slideshow that includes the purpose, the variables and controls, the materials and possible safety concerns, the procedure, photos or video of you actually carrying out the procedure, the raw data you collected, the processing you did to make the data more useful, the results as a written summary (about 1 paragraph), and the conclusion as a written statement (about 2-3 sentences). If you used any resources to help you create your procedure or analyze your results (websites or other sources), list those sources at the end of your slideshow.
- Share your final slideshow with Mr. Edwards via his school email before the specified due date:
jaedwards@wcpss.net.