Paulding County High School

Academy of Science Research and Medicine

STEM Certified Magnet Program

STEM JOURNAL – PPE PBL

**How do we ensure our lab station is clean before and after an experiment?**

**Day 1 – Intro**

Zoom with another Magnet class to discuss

* Discuss what is a PBL and what CER will look like at PCHS (see handout)

Start PPE PBL

* Model STEM Journal

Homework Day 1 –

History of Viruses and Pandemics Articles:

<https://www.livescience.com/worst-epidemics-and-pandemics-in-history.html>

<https://www.livescience.com/56598-deadliest-viruses-on-earth.html>

<https://www.ausmed.com/cpd/articles/donning-doffing-ppe>

**Day 2 – Brainstorm Discussion**

“Academy” Ask a question – How do we ensure our lab station is clean before and after an experiment?

Discuss

* Lab safety practices and procedures (AP Bio students)
	+ <https://www.the-scientist.com/notebook/thirty-years-of-lab-safety-32758>
	+ <https://www.bing.com/videos/search?q=lab+safety+cleanliness+articles&&view=detail&mid=F142D910D2E4E3815B6CF142D910D2E4E3815B6C&&FORM=VRDGAR&ru=%2Fvideos%2Fsearch%3Fq%3Dlab%2Bsafety%2Bcleanliness%2Barticles%26FORM%3DHDRSC4>
* What does PPE mean?
* How can we define “clean”?

Procedure

You will be given a meter stick and glow in the dark spray that simulates microbes/uncleanliness. The goal is to spray the microbes on the lab bench and then determine the best way to clean the lab bench.

* Brainstorm what you can use to clean the desk
* How do you determine if the desk is clean comparing the start to the finish?
* What can you measure and/or calculate?
* We will share ideas and data at the end of class.

**Day 3 – Conducting Experiment**

“Research” Record all data and calculations – write your thought process in your STEM journal.

* Conduct your experiments. In your STEM journal you should have drawings, measurements, data tables, and calculations. Show all work. This is the part that should be messy. YOU MUST WRITE AS YOU GO – IN YOUR JOURNAL!

Day 3 - Healthcare Extension

Conduct the same experiment during second period for handwashing.

* This will also be in your STEM journal.

**Day 4 – Digital Learning Day**

Complete the canvas assignment.

In your STEM journal you will finish the PBL write-up. See handout for details on claim and conclusions.

* “Science” State your claim.
* “Medicine” Make your conclusions and improvements.

**Day 5 – Digital Learning Day**

Upload your PPE PBL on Canvas. You will need to take pictures and upload a file.

\*If in healthcare, upload your extension on Canvas as well.