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IMA4 - Project Proposal

Stopping the Spread: Understanding Pathogens

Problem, Need or Opportunity

Germs and illness are a part of every day life. This year the world was devastated by a highly contagious and deadly respiratory virus known as COVID-19. This virus quickly brought the world to a halt. Countries went into mass quarantines. Schools and businesses closed. As of this writing, more than 50 million people have tested positive for this disease and it has resulted in more than 1.25 million deaths. Understanding what viruses are, how they spread, and how to stop or slow the spread can potentially help millions of people world wide.

In the United States, measures to reduce the spread have reached extreme levels of resistance. This resistance to basic health measures has increased the spread of this virus more so than in countries that were able to implement safety measures. This learning module can help people understand some of what is happening and how they can help.

Targeted Audience

The target audience for this e-learning course is for anyone who wishes to have a brief introduction into pathogens. It is targeted for the middle grades to adults. The material could be used with younger learners with assistance. Understanding of the technology needed to view the course is necessary.

Learners' Needs

- Learners' need a brief introduction into the topic without the science jargon that can get confusing.
- To vary the learning, use of varied visuals, audio, and text will help increase engagement and retention.

Learners' Environment

Learners' can access this course from their homes, offices or schools. Headphones may be needed as there are videos and audio clips that are played. The module could be studied independently or as a group. A strong internet connection is recommended to watch the videos and complete the interactive activities.

Resources and Limitations

With the COVID-19 pandemic, the amount of resources regarding pathogens and infection control has greatly increased. Content and materials should be easily accessible from a variety of sources. I will continue using image search engines such as Google and Bing with the Creative Commons filter turned on. As a last resort since this is an educational project, I will use images from other websites, making sure that I give credit for all images and videos used, regardless of their licensing status. I plan to base the content off a homeschool lesson I completed with my own children.

There are many branches of this project that could get very involved. Some ideas I have include showing animations for immune response and infection control. I also would like to include results from the previously mentioned homeschool experiment that helped visual how germs spread with the use of UV-reactive powder. However, I know

that to keep the project manageable, I will need to keep this project smaller than I am probably envisioning.

Overall Site Schematic

My hope is that this module will entice learners because it will simply introduce a concept that has unfortunately become a huge part of our every day lives. Many people know that germs make us sick, but they may not know how. We are told that we need to do things like wash our hands and wear a mask, but we may not understand exactly how that works to help. My goal is to provide a simple, brief introduction into pathogens in general, to give a little understanding of how viruses and bacteria specifically work and how we can help to stop the spread of them. I plan to leave it generalized rather than COVID focused because it is my hope that this pandemic will get better and I would rather have a module that could be applicable to other common infections.