

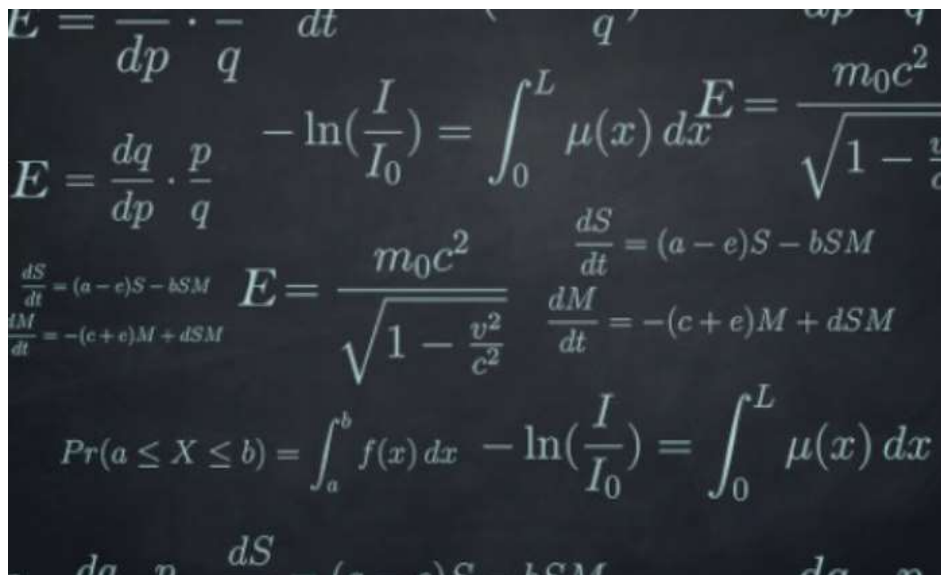
Physics

Isaac Newton's 'Year of Wonder' in comparison to our experience with the Covid-19 pandemic

Alfred Davidson 14D

In 1665, the Great Plague ran rampant across England and killed roughly 100,000 people in a mere 18 months. A national lockdown, similar to those we have experienced during the Covid-19 pandemic, was put into effect. One of those experiencing isolation was a 24-year-old Cambridge student called Isaac Newton.

Newton's experience away from university inspired a streak of scientific experiments, unbridled by the rigidity of the school curriculum. His passion prompted him to build himself a small office complete with self-made bookshelves where he kept a journal full of his calculations. Away from the distractions of the normal world, he turned his isolation period into a time of productivity where his creativity flourished. Some of Newton's most famous works were developed during this time; he discovered differential and integral calculus, explored optics with prism and light experiments and most notably formulated his theory of universal gravitation.

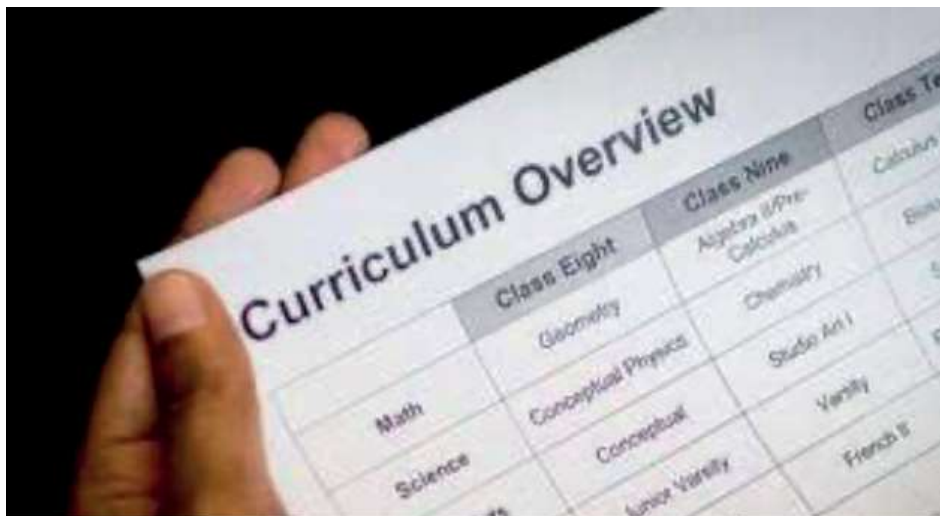


In these uncertain times it is easy to fall into despair. But the Great Plague ended just as this pandemic will. Newton returned to his typical life just as we will. Newton's 'year of wonders' is obviously very different from how most of us (including myself) spent

their quarantine, however his ordeal is something we can all relate to and is a shining example of the tenacity of humanity. Upon reflection, Newton had this to say about his isolation,

“For in those days I was in the prime of my age for invention and minded Mathematics and Philosophy more than at any time since.”

You are in your prime, do not allow these dire circumstances to stand in your way.





Physics

Physics During Lockdown

RACHEL KIRKPATRICK:

My Physics experience in lockdown was definitely one of the easier ones, with practical videos that could be rewatched as many times as needed. This quickly merged into regular Google Meets during class time, with Mr Stewart happily appearing on camera whilst I (and my classmates) kept our cameras off. The only exception to this was the one occasion where my brother thought it would be super funny to turn mine on (without consulting me first, obviously) while my dog was sitting directly in front of the camera. Overall, I gained a lot of new knowledge, most of it regarding magnetism and electricity during the many weeks spent at home.

SIMON FERRIS:

My favourite part of Physics in lockdown, was the inventive videos Mr Stewart made for our class, in particular when he had his son run up the stairs for our prescribed practical, 'The power of a pupil'. On the other hand, the worst part of Physics in lockdown was missing out on being with all of our classmates.

KIERA MCQUAID:

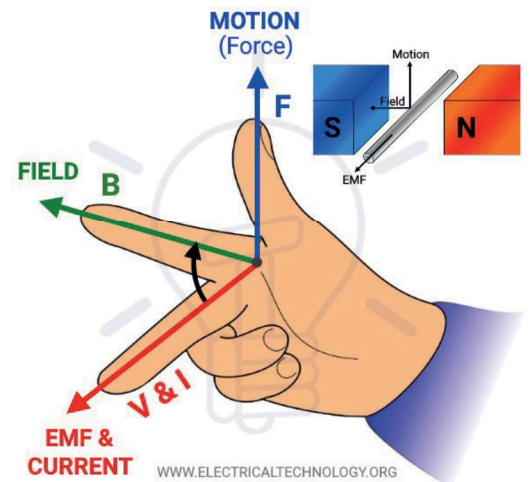
Given that Physics is a subject which requires lots of demonstrations, (any eureka moments I ever had in Physics usually came during experiments) I was wondering how Mr Stewart was going to deliver these experiences. But never fear! Mr Stewart was able to quickly adapt to this brave new online world. Over Google Meet, Mr Stewart showed us the inside of electrical plugs, demonstrated how magnets affect compasses and showed us electromagnets. My favourite Google Meet though, has to be Physics Aerobics! For the uninitiated, Fleming's

Right Hand rule gives the direction in which the current flows. The right hand is held with the thumb, index finger and middle finger mutually perpendicular to each other (at right angles), as shown in the diagram. The thumb is pointed in the direction of the motion of the conductor relative to the magnetic field. As you can imagine, demonstrating Fleming's Right Hand rule whilst trying to angle the camera so we could all see was extremely challenging. After a few attempts (and jokes that he needed three hands!) Mr Stewart was able to angle everything correctly. Even though I have no intention of ever studying Physics again, I will never forget Fleming's Right Hand Rule!

JULIA ENGLEFIELD:

My experience of Physics in lockdown was centred around the comfort of my kitchen table where I participated in regular google meets which I found very helpful, especially when looking at prescribed practicals. Despite some technical difficulties with my printer and avoiding accidentally turning my camera on, with the help of some very useful practical videos, I feel like I have gained a lot of new knowledge on different areas of electricity such as

FLEMING'S RIGHT HAND RULE



electrical power and resistors.

DANIEL MACKLE:

Physics is my most interesting and favourite subject and over lockdown it did not get any less intriguing. While other subjects grew stale during the period of learning from home, I found that physics stayed the same. To me, the topic of domestic electricity was the most fun to learn about as it was so prevalent in day-to-day life.

