

AP Physics 1 Summer Reading Assignment

There is plenty of research out there that states the importance of keeping your brain active over the summer. In that spirit, I would like for you to pick one of the books listed below, read it, and write a short summary of what you think. Detailed instructions are below.

- *A Brief History of Time* by Stephen Hawking
“A landmark volume in science writing by one of the great minds of our time, Stephen Hawking’s book explores such profound questions as: How did the universe begin—and what made its start possible? Does time always flow forward? Is the universe unending—or are there boundaries? Are there other dimensions in space? What will happen when it all ends?”
- *Galileo’s Daughter: A Historical Memoir of Science, Faith, and Love* by Dava Sobel
“Inspired by a long fascination with Galileo, and by the remarkable surviving letters of his daughter Maria Celeste, a cloistered nun, Dava Sobel has crafted a biography that dramatically recolors the personality and accomplishments of a mythic figure whose early-seventeenth-century clash with Catholic doctrine continues to define the schism between science and religion—the man Albert Einstein called ‘the father of modern physics—indeed of modern science altogether.’”
- *Physics for Future Presidents: The Science Behind the Headlines* by Richard A. Muller
“We live in complicated, dangerous times. Present and future presidents need to know if North Korea’s nascent nuclear capability is a genuine threat to the West, if biochemical weapons are likely to be developed by terrorists, if there are viable alternatives to fossil fuels that should be nurtured and supported by the government, if private companies should be allowed to lead the way on space exploration, and what the actual facts are about the worsening threats from climate change. This is “must-have” information for all presidents—and citizens—of the twenty-first century.”
- *Electric Universe: How Electricity Switched on the Modern World* by David Bodanis
“For centuries, electricity was seen as little more than a curious property of certain substances that sparked when rubbed. Then, in the 1790s, Alessandro Volta began the scientific investigation that ignited an explosion of knowledge and invention. The force that once seemed inconsequential was revealed to be responsible for everything from the structure of the atom to the functioning of our brains. In harnessing its power, we have created a world of wonders—complete with roller coasters and radar, computer networks and psychopharmaceuticals.”
- *The Future of Humanity* by Michio Kaku
“With irrepressible enthusiasm and a deep understanding of the cutting-edge research in space travel, World-renowned physicist and futurist Dr. Michio Kaku presents a compelling vision of how humanity may develop a sustainable civilization in outer space. He reveals the developments in robotics, nanotechnology, and biotechnology that may allow us to terraform and build habitable cities on Mars and beyond. He then journeys out of our solar system and discusses how new technologies such as nanoships, laser sails, and fusion rockets may actually make interstellar travel a possibility. We travel beyond our galaxy, and even beyond our universe, as Kaku investigates some of the hottest topics in science today, including warp drive, wormholes, hyperspace, parallel universes, and the multiverse.”

Assignment:

Format: 12 pt. font, Times New Roman, 1-inch margins, double spaced

Heading: Left side of page, First name and last name, title and author of the book you read

In a well-crafted essay in response to the book you chose, please include the following:

- What do you think the book you chose was trying to teach you? Was it successful? Why or why not.
- A summary of three things you learned while reading your book.
- A summary of two things you found most interesting while reading your book and why you chose these.
- One question that you still have about the material and where you might go to find the answer.

This assignment is due on the first day of school and will count as your first quiz grade.