Congratulations on your choice of AP Computer Science Principles for the 2021 - 2022 academic year. I want to start by saying I am very excited that you are taking this course, and I am looking forward to getting to know each and every one of you. AP Computer Science Principles is an introductory college-level computing course. Students cultivate their understanding of computer science through working with data, collaborating to solve problems, and developing computer programs as they explore concepts like creativity, abstraction, data and information, algorithms, programming, the internet, and the global impact of computing. We will spend a lot of time preparing for the AP exam, and you will be taking the exam on the first two full weeks of May 2022.

Prerequisite: Success in Algebra I EOC with a B or better. Students should have a solid foundation for basic linear functions, the composition of functions, and problem-solving strategies. Students should have a good reading and writing skills.

 In order to ensure the best start for everyone next year, you will have to complete work this summer. The assignment is due on the first day of school, Tuesday August 10, 2021. It will count as your first quiz.

Computer and computing technologies have created what is sometimes referred to as a "digital explosion". With the growing development of computing technologies, more and more digital data is being produced at a pace so rapid that is almost seems to be feeding off itself. This concept raises some serious questions. Some of this data is public. Some of it is private, or at least we like to think it is. Where do we draw the line? Alternatively, could one be drawn? Who ultimately "owns" the data and the information that can be drawn from it? What are the security and privacy issues involving the data? These issues have an impact on all of our lives. Some of the impacts are beneficial, and yet some of them can be harmful. We will reflect on these concepts and issues throughout this class.

One way we will be addressing these issues in this course is by reading and discussing _**Blown to**_ _**Bits: Your Life, Liberty, and Happiness After the Digital Explosion**_. This book is available without charge online. You can access the website through this link and download the file as in pdf format. Or type this in your browser http://www.niemanlab.org/pdfs/blowntobits.pdf

You only need to read chapters 1-6 for the summer assignment. Note that throughout the year, you will be given quizzes on the vocabulary and other content from this book.   For this reason, while you are reading, we require you to complete:

1) The attached vocabulary list (find definitions you understand)

I highly recommend that you spread out the reading over the summer. Pace yourself. Please do not try to complete it all in the first week of August. AP CS-Principles concepts take time to process and grasp at a level necessary for success in this class. Remember, AP Computer Science Principles is a college level course. Taking a college level course in high school is not be taken lightly. It requires dedication, and is a great investment in your education so prepare yourself and arrive ready to learn.

Have a great summer and enjoy AP Computer Science Principles.

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Chapter 1:	Chapter 2:	Chapter 3:
bit	ad hoc	algorithm
blacklist	database	analog
character	data aggregation	ASCII
cyberspace	data mining	cloud computing
data center	data repository	cryptography
data	data sources	digital
data network	digital detritus	digital signal processing
disk drive	dossier	download
intellectual property	EDR	lossless compression
Moore's Law	Encode	lossy compression
network	Encryption	megabyte
processor	IP address	megapixels
social networking	Metadata	modeling
whitelist	Query	OCR
	RFID	pixels raster
		render spam
		steganography
		upload

Chapter 4:	Chapter 5:	Chapter 6:
background	AES	centralized systems
binary	certification authority	commons
bot	ciphertext	DRAM
cache	DES	DRM
firewall	decryption	flooding
foreground	encryption	gigabyte
HTML	packet	peer to peer architecture
URL	plain text	piracy
	router	sealed storage TPM

Chapter 1 Vocabulary	
Term	**Definition**
bit	
blacklist	
character	
cyberspace	
data center	
data	
data network	
disk drive	
intellectual property	
Moore's Law	
network	
processor	
social networking	
whitelist	

Chapter 2 Vocabulary	
Term	**Definition**
ad hoc	
database	
data aggregation	
data mining	
data repository	
data sources	
digital detritus	
dossier	
EDR	
Encode	
Encryption	
IP address	
Metadata	
Query	
RFID	

Chapter 3 Vocabulary	
Term	**Definition**
algorithm	
analog	
ASCII	
cloud computing	
cryptography	
digital	
digital signal processing	
download	
lossless compression	
lossy compression	
megabyte	
megapixels	
modeling	
OCR	
pixels	
raster	
render	
spam	
steganography	
upload	

Chapter 4 Vocabulary	
Term	**Definition**
background	
binary	
bot	
cache	
firewall	
foreground	
HTML	
URL	

Chapter 5 Vocabulary	
Term	**Definition**
AES	
certification authority	
ciphertext	
DES	
decryption	
encryption	
packet	
plain text	
router	

Chapter 6 Vocabulary	
Term	**Definition**
centralized systems	
commons	
DRAM	
DRM	
flooding	
gigabyte	
peer to peer architecture	
piracy	
sealed storage	
TPM	