

1. Before watching the video, discuss the following questions:

- What are cryptocurrencies?
- Do governments, corporations, and banks watch how you spend your money?
- How comfortable would you be if you had to use cryptocurrency?

2. Fill in the gaps with the words from the box.

Illegal Smoke Anonymity Counterfeit
Paradigm Interface Revelation Conceal Tinkering

- Cryptocurrency promises the anonymity of your monetary transactions, which means no one could watch your purchases.
- Cryptocurrencies such as bitcoin helped people use illegal services such as buying and selling drugs and weapons.
- Cryptocurrencies appeal to secret organizations that are seeking to conceal their use of money.
- Money is considered counterfeit unless issued by the government.
- Credit cards were invented because people thought cash could not interface with the changes and speed of the modern world.
- Credit cards were a revelation and by 1970 half the American household had one.
- For as long as we've been tinkering on the computer, there has been a dream of digital cash.
- The internet was built upon a paradigm in that everyone was a trusted user.
- When the bitcoin market crashed in 2018, half the value of bitcoins "went up in smoke".

3. Answer these questions from the video:

A. What was the appeal of the first-ever credit card called the "Diner's Club International"?
The Diner's Club International credit card advertised itself as a ticket to a modern lifestyle. The advertisements made people think that cash was not sufficiently modern to interface with our efficient world. Essentially, carrying a credit around would be better.

B. Why do people who live in tightly-controlled countries find cryptocurrencies attractive?
Policy-makers and leaders in certain countries may choose to block certain types of transactions that don't agree with their political regime. Thus people can't spend money freely. Cryptocurrency allows you to buy and sell things without Big Brother watching you.

C. What is the Byzantine Generals Problem?
A group of generals each leading an army wants to attack a city but must reach a consensus on whether to attack or retreat. The generals don't trust each other and may act against their words. One dishonest general means everyone dies in the battle. Generals had to route their battle plans through a central authority.

4. Answer these questions from the video:

A. What is blockchain and how is it an example of a distributed network?

A blockchain is essentially a list of transactions similar to how a bank maintains all your transactions. Copies of this list are distributed around the world and are maintained and verified anonymously by a network of people maintaining it. No central parties maintain the list; therefore, it is called a distributed network. The system pays cryptocurrencies to people who volunteer to update the list.

B. Why do criminals and illegal marketplaces like to use blockchain?

Blockchain enables people to buy drugs and weaponry on illegal online marketplaces because there are minimal regulations.

C. What happened between 2010 and 2018 to the cryptocurrency market?

Between 2010 to 2017, Bitcoin's value increased exponentially. In January 2018, Bitcoin crashed and lost half its value. It appears that people had a general uncertainty over how much it was truly worth. Finally, people felt that the government could intervene and regulate the cryptocurrency market, defeating the original intent of blockchain.

5. List some pros and cons of using cryptocurrencies. You may research online resources.

Benefits of Using Cryptocurrencies	Disadvantages of Using Cryptocurrencies
<ul style="list-style-type: none"> ● Staying anonymous when completing transactions using cryptocurrencies 	<ul style="list-style-type: none"> ● Cryptocurrency markets are quite volatile and are susceptible to sudden price changes, causing people to lose a lot of money.
<ul style="list-style-type: none"> ● No centralized system needed (such as a bank) to track all the transactions. 	<ul style="list-style-type: none"> ● Some cryptocurrencies don't allow you to change your password. You may forever lose access to your money.
<ul style="list-style-type: none"> ● If you live in a country where your rights and freedoms are restricted, you can still purchase and sell things without being regulated by the government. 	<ul style="list-style-type: none"> ● Blockchain enables criminals to pay for illegal activity since they cannot be tracked using conventional methods.

6. Give some examples to explain the following statements. Please explain in 3 - 4 sentences.

1. “The internet is filled with third parties to store and verify customer information.”
Companies such as Paypal act as intermediaries that facilitate monetary transactions between users. This ensures that customers who pay for products and services will be guarantee protection if a company commits fraud. Alternatively, companies can have full confidence that consumers are paying with legitimate means.
2. “The concept of "value exchange" in our economy is not just about money.”
Companies and end-users of goods and services exchange value. For example, we give tech companies our information in return for using its services to connect with others. When we use Facebook, we are not their customers: we pay them and provide the behemoth with our valuable online data.
3. “There have been over 2.5 million lost bitcoins... which were worth over 20 billion dollars.”
Bitcoins are also susceptible to hacks that occur when people forcibly trying to access your account. Some cryptocurrency management companies have mismanaged their clients' accounts or run away with client money. Finally, if you forget your password, there is no way to access your bitcoins or reset your password.

7. Essay and Discussion Questions

1. What industries can blockchain revolutionize? What new decentralized applications will emerge out of this infrastructure.
2. Do you believe that digital currencies will improve or hinder our lives?
3. What are the pros and cons of using digital currencies?
4. Do you believe that blockchain will become mainstream and what effects does it have on our lives in the next 20 years?

