Outline:

Use selected on-line articles to explore current issues related to crypto currencies such as BitCoin. A focus for learning is: the underlying technologies, impacts on society, and impacts on the environment.

Objectives:

* C1.4 describe how electronic access to information influences our everyday lives.
* C2.1 describe the negative effects of computers and computer use on the environment.
* C3.1 describe legal and ethical issues related to the use of computers.

**BitCoin & Crypto currencies**

Use the following resource to answer the questions below:

* <https://www.investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/>

1. What is a “crypto currency” and how are “crypto currencies” different from traditional currencies (money)?

Cryptocurrency is the future of money and is money which isn’t the responsibility of the government but fiat money is owned by government. The government supplies fiat money and we use it to pay with cash or debit cards but cryptocurrency isnt’t legal money. It’s decentralized and global

1. BitCoin is the leading crypto currency that most people know. What are some other crypto currencies and what are their unique features?

Other cryptocurrencies are Litecoin, Etherum, Bitcoin Cash, Ripple, DarkCoin (DASH). Litecoin is the second most digital coin. It mostly uses the same technology of bitcoin. Etherum is the second most important after bitcoin

**Block Chains Explained**

Use the following resource to answer the questions below:

* <https://www.investopedia.com/terms/b/blockchain.asp>

1. “Block chains” are the basic technology behind crypto currencies and other emerging technologies. Explain block chains work with respect to:
   1. What they store
   2. How they work
   3. How they are secure and private
   4. How they use public and private encryption keys

a.Blocks store information of transactions like the date,time, and dollar amount of your purchase, your name and digital signature will also be stored

b. a transaction must occur, your transaction will be verified according to the rsecurity, terms of service rules, after it’s verified the the transaction’s dollar amount, your and amazon’s digital signature will be stored in a block, finally the block will be given a unique indentifying code so it doesn’t mix up with the other users blocks

c.anyone can view the contents of the blockchain, but there’s millions of copies of the same blockchain, but in a network of so many identical copies it’s difficult to manipulate blockchains , it’s hard for a hacker, after a block has been added it’s very difficult to go back and scramble through it’s contents. Blocks are stored very securely

d. to enter into your bitcoin wallet or blockchain , you have a unique key, it’s a key kept for the private bitcoin users, public is that your adding blockchains to your bitcoin every time you make a transaction

1. How does BitCoin use block chains?

Because a blockchain’s job is to allow digital information of transactions to be recorded, when someone pays for something digitally, that transaction’s information is stored in a blockchain

1. What are some advantages and disadvantages of block chains?

Advantages are that everytime you make a transaction it’s stored in a blockchain, you can go back anytime and check it, disadvantages might be that it’s not private but it’s difficult to hack into someone’ personal information

**Crypto-Games & Other Applications**

Use the following resource to answer the questions below:

* <https://egamers.io/beginners-guide-to-crypto-games/>

1. What are some interesting Crypto Games (i.e. games that use Block Chain technology) available for Android or iPhone?  
   pay to play, mining games, free to play
2. How are Crypto Games different from conventional games?

Conventional games are traditional games such as Candy Crush Saga, Subway Surfers, Minecraft ,other games we download and play but crypto games are financial business games and it’s a new generation of games and crypto games have newer features of you getting rewarded

And purchasing items and characters

1. What are some other real-world applications of block chains besides games and crypto currencies?

Bank Account

**BitCoin & Society**

Read the following resources before answering the questions below:

* <https://www.cnet.com/how-to/what-is-bitcoin/>
* <https://www.independent.co.uk/life-style/gadgets-and-tech/news/bitcoin-price-fall-criminals-blockchain-anonymous-cryptocurrency-zcash-monero-dash-a8174716.html>
* <https://coincenter.org/link/why-ransomware-criminals-use-bitcoin-and-why-that-could-be-their-undoing>

1. How is BitCoin created and what is "BitCoin Mining"?

Bitcoin is mined by powerful computers connected to the internet, encryption keys are used for the user’s information, Bitcoin mining is a group or company, the miners are behind the process of storing a bitcoin in a blockchain, mines do a combination of advanced math and record keeping, the miners inscribe these transactions that you make in a gigantic digital ledger

1. Can you buy BitCoin and what does it cost?

You can buy cryptocurrencies exchanges which has a fee for trading, purchasing, and selling coins, when you buy and sell bitcoins there are fees including transaction fees, withdrawal fees, deposit fees, and trading fees and escrow fees . The current price of bitcoin is $9,165.79

1. What can you use BitCoin for?

You can use bitcoin to buy merchandise, you have transaction fees and exchanges

1. What are the risks of using BitCoin?

There are hackers using bitcoin, there aqre risks of cyberthefts, if you lose your key encryption code, there’s a serious chance that hacking might happen and your coins will be retrieved, there’s fraud use buying and selling, there can be fake exchanges. As the bitcoin economy increases, the program might burst then then bitcoin will have no value and a lot of financial loss

1. How much of BitCoin business is related to criminal activity?

About 95% of cryptocurrency crime has happened, people steal, sell drugs

1. What are some of the reasons why criminals use BitCoin?

To make a fortune of money by selling fake merchandise or drugs or weapons

1. What are some of the disadvantages of BitCoin when used for criminal activity?

You could get hacked or fooled by a criminal. On a news report they reported a Boston manstole $7.5 million in bitcoin by hacking his victim’s cell phones through SIM swapping scam

**BitCoin & The Environment**

Read the following resources before answering the questions below:

* <https://www.cbc.ca/news/business/bitcoin-electricity-1.4668768>
* <https://www.cbc.ca/news/business/hut8-medicine-hat-bitcoin-mining-1.4834027>

1. What is a BitCoin “miner” and why are people concerned about BitCoin mining?

Bitcoin miners are the powerful program or people behind bitcoin programming it. This Bitcoin industry is growing fast and the concern is it uses a lot of electricity and power supply and globally there’s so many computers on this bitcoin network. Largest mining facilities are set up in Manitoba, Quebec, Iceland where they are provided with a steady supply of cheap power

1. Why does BitCoin mining use so much energy?

The bitcoin system is designed so cryptocurrency can be mined but as more miners increase in competing for a decreasing amount of available bitcoins, facilities have to use more electricity compared to the amount of cryptocurrency people collect

1. Why has Hut-8 decided to locate its facility in Alberta when its head office is in Toronto? What does the city of Medicine Hat provide that is required for mining BitCoin?

They need gas fired generation and medicine hat has the facility for that

1. What benefits does the city of Medicine Hat expect to see from this BitCoin facility?

They are looking forward to see and be receiving a significant financial boost

1. What concern does the city of Medicine Hat have about from this Bitcoin facility?

The Bitcoin network uses as much electricity as all of medicine hat a city with more than 60,00 people and large industrial plants, the bitcoin system uses even more electricity than other industries and facilities in the city, this can be a risk for the city to power cuts and blackouts

1. What concern do environmentalists have about the Medicine Hat facility and about BitCion mining in general? E.g. how does BitCoin mining harm the environment?

Electricity is the main and also a lot of fossil fuels burning to provide electricity

1. If Hut-8 wanted to build a facility in Brampton, would be in favor of this proposal? Explain why and why not.

I would be in favor of the proposal, as it will have us a financial boost, but also not in favor because even Brampton is a small town and it might affect our electricity powers in the community