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)?

Crypto Currency is a digital based currency that is relied on demand and they are completely independent from governments or banks. The reason it is like this is because there is only a limited number of coins that can be created so unlike currencies that governments control can drop but the only way the value of bitcoin will drop is through the demand.

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

Lit Coin is one of the first cryptocurrencies just like BitCoin but Lit coin is refered to the “silver of BitCoin” but Litcoin is unique compared to bitcoin because despite of Litcoin’s

**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
2. How does BitCoin use block chains?
3. What are some advantages and disadvantages of block chains?

**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?
2. How are Crypto Games different from conventional games?
3. What are some other real-world applications of block chains besides games and crypto currencies?

**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"?
2. Can you buy BitCoin and what does it cost?
3. What can you use BitCoin for?
4. What are the risks of using BitCoin?
5. How much of BitCoin business is related to criminal activity?
6. What are some of the reasons why criminals use BitCoin?
7. What are some of the disadvantages of BitCoin when used for criminal activity?

**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?
2. Why does BitCoin mining use so much energy?
3. 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?
4. What benefits does the city of Medicine Hat expect to see from this BitCoin facility?
5. What concern does the city of Medicine Hat have about from this Bitcoin facility?
6. 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?
7. If Hut-8 wanted to build a facility in Brampton, would be in favor of this proposal? Explain why and why not.