



K-12 Curriculum Project Teacher Resource Guide

Bitcoin

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Presentation Summary:

About a decade ago, the Bitcoin network was launched by its pseudonymous creator. It promised a revolution in how money works. Here at last, some thought, was an inclusive digital system for storing and transferring value -- a system that was inflation-proof, censorship-resistant, and independent of any central and commercial bank. Bitcoin has since spawned thousands of cryptocurrencies, and they command coverage in both popular media and technical research by computer scientists, economists, and lawyers. In this presentation, I briefly explain what the Bitcoin network is. Then I discuss the features money is standardly taken to have, and based on those features, whether Bitcoin is money. Finally, I talk about whether Bitcoin is *good*. If Bitcoin could be money, should we use it?

Targeted Grades: Middle School (6-8) / High School (9-12)

Wyoming Social Studies Standards Lesson Aligns With:

- **SS8.3.1** Identify and apply basic economic concepts (e.g., supply, demand, production, exchange and consumption, labor, wages, scarcity, prices, incentives, competition, and profits).
- **SS8.3.3** Describe the impact of technological advancements on production, distribution, and consumption. (e.g., businesses and/or corporations in the United States and the world).
- **SS8.3.4** Explain or illustrate how money is used by individuals, groups, and financial institutions.
- **SS8.3.5** Describe how values and beliefs influence individual, family, and business decisions (microeconomics).
- **SS12.3.1** Analyze the impact of supply, demand, scarcity, prices, incentives, competition, and profits on what is produced, distributed, and consumed.
- **SS12.3.3** Analyze and evaluate the impact of current and emerging technologies at the micro and macroeconomic levels (e.g., jobs, education, trade, and infrastructure) and their impact on global economic interdependence.
- **SS12.3.4** Explain how financial and government institutions make economic decisions (e.g., banking, investment, credit, regulation, and debt).
- **SS12.3.5** Evaluate how values and beliefs influence microeconomic and macroeconomic decisions.

Suggested Discussion Questions/Activities:

1. Before watching the video, have the class divide into groups of 5-10 and discuss what they think money is. What features does something have that make it money? Is digital money possible? If so, what would it look like?
2. After the video, have them get back into groups. Look at their definitions of money and digital money. Did they add anything they shouldn't have? Did they miss anything?
3. With the whole class together, list the features of money, and the features of Bitcoin.
4. Is Bitcoin money? What are the best reasons for saying "yes"? The best reasons for saying "no"?
5. How does Bitcoin differ from the kinds of money you know about?
6. Who is Bitcoin good for?
7. Who is Bitcoin bad for?
8. Is Bitcoin good overall?

Sources for Additional Information on the Topic:

Suggested Reading

- Bitcoin Collective: Timi Ajiboye, Luis Buenaventura, Lily Liu, Alexander Lloyd, Alejandro Machado, Jimmy Song, Alena Vranova (2019). *The Little Bitcoin Book*.
- Andreas Antonopolous (2016). *The Internet of Money*. Merkle Bloom LLC.
- Satoshi Nakamoto (psuedonym). The Bitcoin Whitepaper. <http://bitcoin.org/bitcoin.pdf>
- Bradley Rettler. "Bitcoin and Financial Injustice." <http://resistance.money/BFI.pdf>

Podcast Resources

- Bitcoin in the Senate w/Senator Lummis (WY!):
<https://www.whatbitcoindid.com/podcast/bitcoin-in-the-senate>
- The Breakdown: Why Bitcoin has more Ideological Flexibility than You Think:
<https://www.coindesk.com/podcasts/coindesk-podcast-network/bitcoin-politics-philosophy-ideological-flexibility> (featuring Dr Rettler)
- Alex Gladstein: Why Bitcoin Matters for Freedom:
<https://www.whatbitcoindid.com/podcast/alex-gladstein-on-why-bitcoin-and-decentralised-technology-matters-for-freedom>

Video Resources

- Andreas Antonopolous' Introduction to Bitcoin:
<https://www.youtube.com/watch?v=l1si5ZWLgyo>
- Alex Gladstein's Present and Future of Bitcoin on Human Rights:
<https://www.youtube.com/watch?v=9520obdb4QM>

Contacting the Wallop Team:

For information on how to schedule a chat-back "Ask Me Anything" session with Bradley Rettler or for more information on this or other modules contact the Wallop Program Team at wallop@uwyo.edu.