

The Problem Bitcoin Solves

Grades 9–12 • 1:31 video • Saving 12–3b • thesteadyblock.com/episodes/problem-bitcoin-solves/

Students learn why digital money can't simply be copied, how banks stop the same money being spent twice by keeping the record, and the different fix bitcoin proposed in 2008, with its trade-offs.

1 Before watching

You can copy a photo or a song as many times as you like. What would happen if you could do the same with the money in a bank account?

2 Watch the episode

1:31, at thesteadyblock.com/episodes/problem-bitcoin-solves/ or on YouTube (@TheSteadyBlock).

3 Discuss

1. What is double spending, and why would digital money be worthless if anyone could do it?
2. How does your bank stop you from spending the same money twice? What do you gain from having one record keeper, and what is the risk?
3. Supporters of bitcoin say a record kept by computers around the world removes the need to trust one middleman; critics, such as the Bank for International Settlements, say such a system is slow, costly and hard to scale, and that there is no bank to call when something goes wrong. For everyday payments, which trade-off matters more to you, and why?

Key terms

Double spending	Paying with the same money twice.
Middleman	A trusted go-between, such as a bank, that keeps the record of who paid whom.
Record (ledger)	A list of payments that shows who paid whom and what is already spent.
Shared record	A record of payments that many computers keep and check together, instead of one bank.

4 Exit quiz: answer key

1. A Paying with the same money twice

Double spending means using the same money for two payments, which digital copies would make easy.

2. B Your bank keeps the record and marks money as spent

The bank keeps the record, checks each payment and marks money as spent.

3. C Announcing every payment to everyone and letting computers around the world keep the record together

The bitcoin paper proposed a shared record kept by many computers instead of one middleman.

4. D The first one

The first spend counts and the copy is rejected.

5. B There's no bank to call, and mistakes are hard to undo

The episode lists the trade-offs: no bank to call, minutes to settle, public records, and mistakes that are hard to undo.

National standard

MAIN STANDARD • SAVING 12-3B

Compare and contrast the features of mobile payment accounts, cryptocurrency accounts, and checking/savings accounts.

Also: Spending 8–4c,
Economics Standard 11, grade 12, benchmark 1. From the National Standards for Personal Financial Education (Council for Economic Education and Jump\$tart Coalition, 2021); Voluntary National Content Standards in Economics (Council for Economic Education, 2nd edition, 2010).

The student quiz handout, numbers, sources and further reading are on the full teacher page: thesteadyblock.com/teachers/problem-bitcoin-solves/. Free to use in class. Educational content only, not financial or investment advice.