

The 21 Million Rule

Grades 9–12 · 1:35 video · Economics Standard 11 · thesteadyblock.com/episodes/21-million-rule/

Students learn how bitcoin's supply schedule works: a new block about every 10 minutes, a reward that halves every 210,000 blocks, and a total that flattens just under 21 million, enforced by the network's rules.

1 Before watching

Who decides how many dollars exist? Who do you think decides how many bitcoin exist?

2 Watch the episode

1:35, at thesteadyblock.com/episodes/21-million-rule/ or on YouTube (@TheSteadyBlock).

3 Discuss

1. Walk through the halving: why does cutting the reward in half about every four years mean the total never passes 21 million?
2. Many currencies can expand their supply when a central bank decides to, while bitcoin's schedule is written into its software. Who is in charge of each, and what would it take to change each one?
3. Supporters of a fixed supply say it protects savers because no one can create more; critics say a currency needs to be able to expand in a crisis or as an economy grows. Which argument do you find stronger, and what evidence would change your mind?

Key terms

Block reward	The new bitcoin paid to whoever adds a block.
Halving	The cut in half of the block reward every 210,000 blocks, about every four years.
Supply cap	The limit of 21 million bitcoin set by the network's rules.
Central bank	An institution, such as the Federal Reserve, that manages a country's money supply.

4 Exit quiz: answer key

1. B About every 10 minutes

A new block is added about every 10 minutes on average.

2. C 50 bitcoin

The reward started at 50 bitcoin per block and has been halved four times since.

3. D Cutting the block reward in half every 210,000 blocks

Every 210,000 blocks, about every four years, the reward for adding a block is cut in half: 50, 25, 12.5, 6.25, and 3.125 since April 2024.

4. A About 20.1 million

About 20.1 million, roughly 96% of the cap; the last tiny fractions arrive around 2140.

5. C Thousands of independent computers reject any block that breaks the rules

The schedule is written into the software, and the computers that check every block reject one that pays out too much.

National standard

MAIN STANDARD · ECONOMICS STANDARD 11

The amount of money in the economy affects the overall price level.

Also: Economics Standard 20, Economics Standard 11, grade 12, benchmark 5, Saving 12–4. From the Voluntary National Content Standards in Economics (Council for Economic Education, 2nd edition, 2010); National Standards for Personal Financial Education (Council for Economic Education and Jump\$tart Coalition, 2021).

The student quiz handout, numbers, sources and further reading are on the full teacher page: thesteadyblock.com/teachers/21-million-rule/. Free to use in class. Educational content only, not financial or investment advice.