

Name _____

Unveiling the Magic: How Blockchain Transactions Are Verified

Short Answer Key

1. Blockchain achieves immutability for transactions by making them permanent and unalterable once they are confirmed and added to the blockchain.
2. Nodes play the role of witnesses in the verification process of blockchain transactions, ensuring the transaction's validity before it is added to a block.
3. Consensus mechanisms are rules or protocols used to achieve agreement among network participants about the validity of transactions. They are crucial for maintaining the integrity of blockchain networks.
4. Blockchain technology offers benefits beyond cryptocurrencies, including transparency, security, trustlessness, and immutability, making it suitable for applications such as supply chain management, voting systems, and digital identity.
5. Environmental concerns related to blockchain technology are being addressed by exploring more energy-efficient consensus mechanisms like Proof of Stake (PoS) and by promoting the use of renewable energy sources for mining operations.

