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DeFi and NFTs: A First Look

How decentralized finance replaces banks and brokers with smart contracts, where DeFi yields really come from, what you actually own when you buy an NFT, and how the NFT boom turned to bust

11 min read 8 quiz questions with answer key

CRYPTO · BEGINNER · LESSON 12 OF 15

DeFi and NFTs: A First Look

IN ONE SENTENCE

DeFi offers lending, trading and earning through smart contracts instead of financial companies, and NFTs are unique tokens that prove ownership of a digital item, but both carry risks that traditional finance and collecting do not.

What is DeFi?

DeFi, short for decentralized finance, is the name for financial services that run as smart contracts on a blockchain instead of through banks, brokers or exchanges. Lending, borrowing, trading, earning interest: the same activities, but with code in the middle instead of a company.

That changes a few things:

- Anyone with a wallet can use it, at any hour, from any country, without opening an account.
- The rules are public code, and every transaction is visible on the blockchain.
- There is no customer service, no deposit insurance and usually nobody to reverse a mistake.

A common way to measure DeFi's size is **total value locked (TVL)**: the value of all crypto deposited in DeFi apps. According to DefiLlama data, it was about **$95 billion** at the end of September 2026.

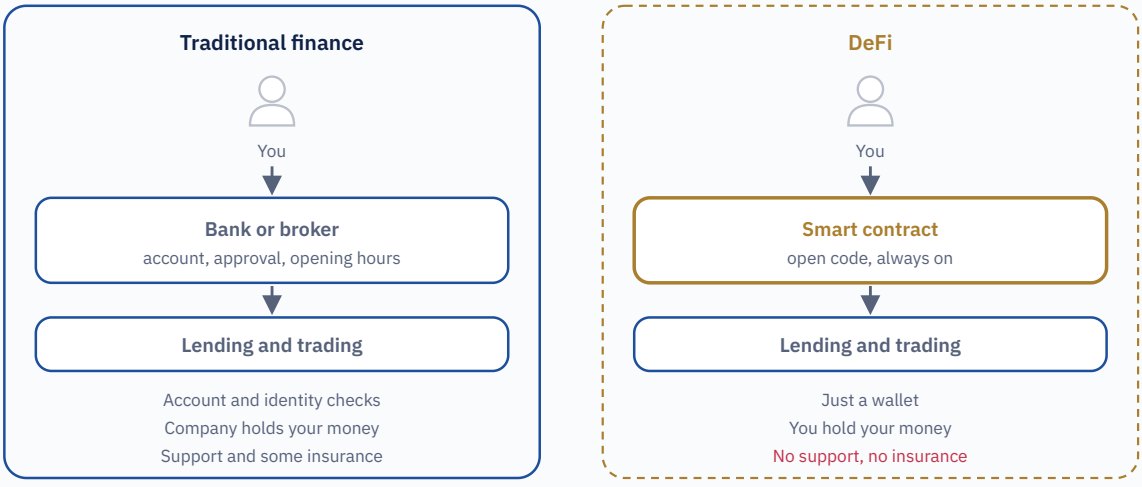


Figure 1. In traditional finance a company stands between you and the market. In DeFi you connect your own wallet directly to smart contracts.

The building blocks

You have already met several parts of DeFi in this course:

- **Decentralized exchanges** such as Uniswap, where tokens are swapped against liquidity pools (Lesson 9).
- **Stablecoins**, especially crypto-backed ones such as DAI (Lesson 6).
- **Lending markets** such as Aave, where users lend and borrow crypto.
- **Staking and liquid staking**, where users lock coins to help secure a network and receive a token that represents their stake, such as Lido's stETH.

Because all of these are open smart contracts, they can be plugged into each other. A token received from one app can be deposited straight into another. This is called **composability**, and people often compare DeFi apps to building blocks or "money Lego". It allows fast innovation, but it also means a failure in one block can spread to every app built on top of it.

How DeFi lending works

A DeFi lending app is a smart contract holding a pool of tokens:

- **Lenders** deposit tokens, for example USDC, into the pool and earn interest.
- **Borrowers** take tokens out of the pool, but first they must lock collateral worth more than the loan, for example ETH.
- Interest rates move automatically: when most of the pool is borrowed, rates rise to attract more lenders and discourage borrowers.

There is no credit check, because the collateral protects the lenders. If the collateral's value falls too close to the loan, the contract sells it automatically to repay the debt. This is the same **liquidation** you met with DAI in Lesson 6 and with leverage in Lesson 11.

Why borrow at all if you must lock more than you borrow? Usually to get cash or stablecoins without selling a coin you want to keep, or to use the borrowed money for trading.

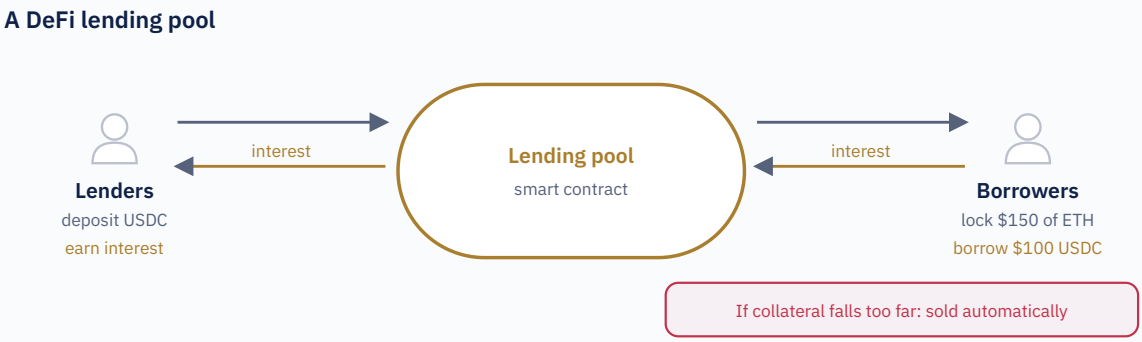


Figure 2. Lenders deposit into a pool and earn interest. Borrowers lock collateral worth more than the loan, which is sold automatically if its value falls too far.

Where does the yield come from?

DeFi apps often advertise an **APY**, the annual percentage yield. Before trusting any number, ask where the money comes from. There are only a few real sources:

- **Borrowers' interest:** lenders are paid by people who borrow.
- **Trading fees:** people who supply liquidity to a DEX pool earn part of each swap's fee.
- **Network rewards:** stakers earn new coins and fees for helping to secure a blockchain.
- **Token incentives:** many apps pay extra rewards in their own token to attract deposits. This yield is printed rather than earned, and it often falls quickly, along with the token's price.

When a yield is far higher than these sources could plausibly pay, the gap often means hidden risk, or that new depositors' money is paying earlier ones. A well known saying in crypto puts it bluntly: *if you can't tell where the yield comes from, you are the yield*. Before TerraUSD collapsed (Lesson 6), a platform called Anchor was paying close to 20% a year on UST deposits.

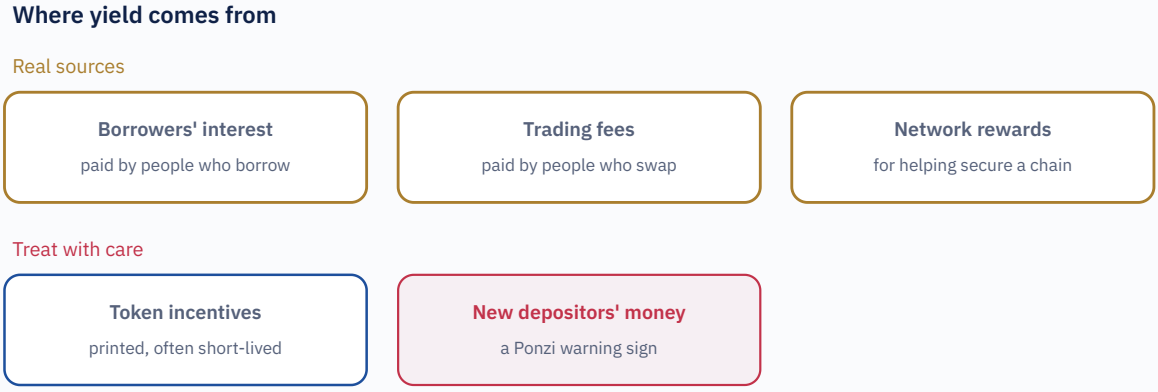


Figure 3. Only a few sources can pay a real yield. Token incentives fade, and yield paid from new depositors' money is a Ponzi warning sign.

The risks of DeFi

- **Smart contract bugs and hacks:** code can be exploited. Hacks across crypto had taken more than $2.3 billion in 2026 by the third quarter, much of it from DeFi apps and bridges.
- **Token approvals:** to use a DeFi app, you give its contract permission to move a token from your wallet. Many apps ask for unlimited permission by default. If that contract, or a fake one you approved by mistake, is malicious, it can empty that token from your wallet later. Tools such as Revoke.cash let you see and cancel old approvals.
- **Oracle problems:** DeFi apps rely on price feeds. A wrong or manipulated price can trigger unfair liquidations.
- **Admin keys and rug pulls:** some apps can be changed or drained by their developers. Lesson 14 covers this.
- **Your own mistakes:** wrong network, wrong address, signing something you did not read. Nobody can undo them.

The Intermediate level covers liquidity pools, impermanent loss and wallet protection in depth.

NFTs: one of a kind tokens

An **NFT**, or non-fungible token, is a token where every unit is unique. One bitcoin equals any other bitcoin, but NFT number 42 in a collection is not the same as number 43. On Ethereum, NFTs usually follow the **ERC-721** standard.

What do you actually own when you buy an NFT? Usually:

- a token on the blockchain, recorded under your address, with a unique ID,
- that points to a description and an image or other file, which is usually stored somewhere else, on a website or a storage network such as IPFS.

Owning the NFT proves that you own that token. It does not automatically give you the copyright to the image, and if the file it points to is removed, the token may end up pointing to nothing. Each project's terms decide what rights come with it.

NFTs are used for digital art and collectibles, items in games, event tickets, memberships and blockchain names such as ENS addresses.

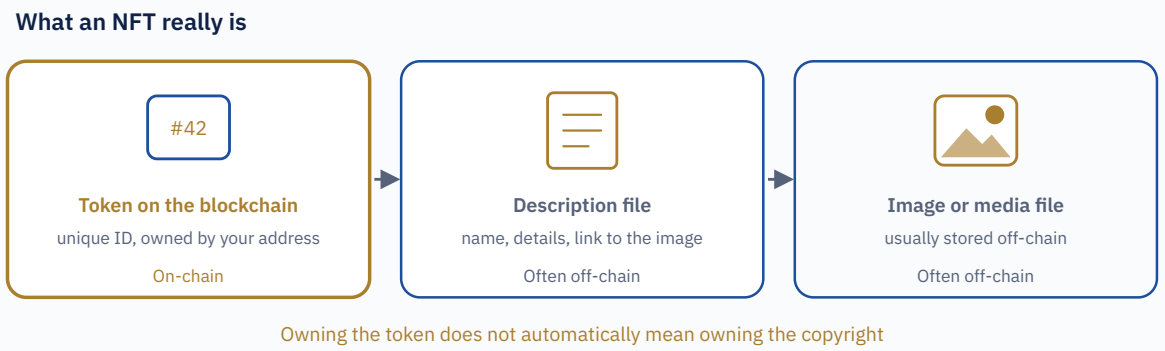


Figure 4. An NFT is usually a token that points to a description and a file stored somewhere else.

The NFT boom and bust

NFTs went mainstream in 2021. On 11 March 2021 the auction house Christie's sold a digital artwork by the artist Beeple as an NFT for **$69.3 million**. Collections of cartoon apes and pixel portraits sold for hundreds of thousands of dollars each, and OpenSea, the largest NFT marketplace, handled about **$5 billion** of trades in January 2022 alone.

Then the market collapsed. By late 2022 monthly volumes were down more than 90%, and many collections lost almost all their value. In November 2025, NFT trading across all major marketplaces was about **$320 million** for the whole month, according to CryptoSlam.

The technology has continued in tickets, gaming and on-chain names, but the speculative boom shows how quickly an asset driven mainly by hype can lose its buyers.

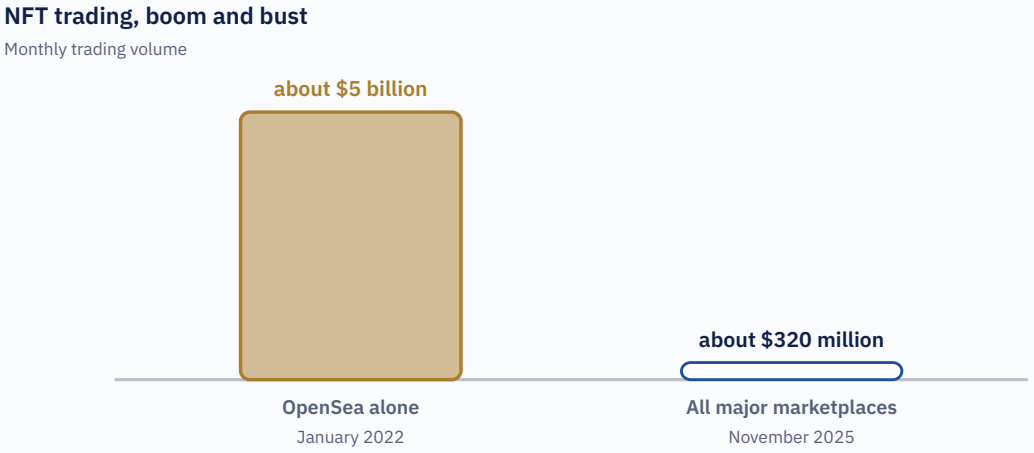


Figure 5. Monthly NFT trading at the peak, on OpenSea alone, compared with the whole market in November 2025 (CryptoSlam data).

Why this matters for traders

- **DeFi activity drives demand for some coins.** Busy DeFi markets mean more fees and more demand for the native coins of the chains they run on, such as ETH and SOL.
- **TVL is a rough measure of confidence.** TVL rising or falling over months shows whether money is flowing into on-chain apps or leaving. Part of TVL moves simply because token prices move, so it is best compared over time.
- **On-chain liquidations add to sell-offs.** When prices drop sharply, DeFi lending apps sell collateral automatically, adding to the pressure seen in Lesson 11.
- **High advertised yields carry high risk.** In crypto, unusually high yields have repeatedly come before collapses, as with TerraUSD in 2022.

Key terms

DeFi	Decentralized finance: financial services such as lending and trading run by smart contracts instead of companies.
Total value locked (TVL)	The total value of crypto deposited in DeFi apps.
Composability	The ability of DeFi apps to plug into each other, like building blocks.
Collateral	Assets locked to secure a loan, which can be sold automatically if their value falls too far.
APY	Annual percentage yield: the yearly return including compounding.
Token approval	Permission given to a smart contract to move a specific token from your wallet.
NFT	Non-fungible token: a unique token that represents ownership of a specific digital item.
ERC-721	The standard for NFTs on Ethereum.

Key takeaways

1. DeFi runs lending, trading and earning as smart contracts. Its TVL was about $95 billion at the end of September 2026.

2. DEXs, stablecoins, lending markets and liquid staking plug into each other, which speeds innovation but spreads failures.
3. DeFi loans are backed by collateral worth more than the loan, and are liquidated automatically if it falls too far.
4. Real yield comes from borrowers' interest, trading fees and network rewards. Yields far above these usually mean hidden risk.
5. Hacks, unlimited token approvals, price feed problems and your own mistakes are the main DeFi risks.
6. An NFT is a unique token that points to a file. NFT trading peaked around $5 billion a month on OpenSea in January 2022 and later fell more than 90%.

Test yourself

Circle one answer for each question. The answer key with explanations is on the next page. You can also take this quiz online at markettalks.info and see your score instantly.

1. What is DeFi?

A. A new type of bank account
B. Financial services run by smart contracts instead of companies
C. A government digital currency
D. A crypto exchange owned by banks

2. What does TVL measure?

A. The number of DeFi users
B. The total value of crypto deposited in DeFi apps
C. The total trading volume of all exchanges
D. The value of all NFTs

3. Why can DeFi lending apps lend without a credit check?

A. They only lend to banks
B. Borrowers must lock collateral worth more than the loan
C. Loans are insured by the government
D. Borrowers sign a legal contract

4. Which of these is a real, sustainable source of DeFi yield?

A Interest paid by borrowers
B A promise that the yield will never fall
C Money from new depositors paying earlier ones
D A number shown on a website

5. What is the risk of giving a DeFi app unlimited token approval?

A It raises your gas fees forever
B If the contract is malicious or hacked, it can move that token out of your wallet later
C It makes your wallet public
D There is no risk

6. What does buying an NFT usually give you?

A The copyright to the image
B A token on the blockchain that points to a file usually stored elsewhere
C The image file stored inside the blockchain itself
D A share in the marketplace

7. What did Beeple's NFT artwork sell for at Christie's in March 2021?

A $69,300
B $6.9 million
C $69.3 million
D $693 million

8. What happened to NFT trading after its peak in early 2022?

A It kept rising every year
B Monthly volumes fell more than 90% by late 2022
C NFTs were banned worldwide
D It moved entirely to Bitcoin

Answer key

1 B

Financial services run by smart contracts instead of companies

DeFi replaces banks and brokers with public code. Anyone with a wallet can use it, but there is no customer support or insurance.

2 B

The total value of crypto deposited in DeFi apps

Total value locked adds up the crypto held in DeFi contracts. It was about $95 billion at the end of September 2026.

3 B

Borrowers must lock collateral worth more than the loan

The extra collateral protects lenders. If it loses too much value, it is sold automatically to repay the loan.

4 A

Interest paid by borrowers

Borrowers' interest, trading fees and network rewards are real sources. Money from new depositors paying old ones is the shape of a Ponzi scheme.

5 B

If the contract is malicious or hacked, it can move that token out of your wallet later

An approval lets a contract move your tokens. Old or unlimited approvals can be checked and cancelled with tools such as Revoke.cash.

6 B

A token on the blockchain that points to a file usually stored elsewhere

The token proves ownership of that token. Copyright and the file's storage depend on the project, and are often separate.

7 C

$69.3 million

The $69.3 million sale on 11 March 2021 helped launch the NFT boom, which later collapsed.

8 B

Monthly volumes fell more than 90% by late 2022

OpenSea handled about $5 billion in January 2022. By November 2025 the whole market traded about $320 million in a month.

SOURCES

- KuCoin News, DeFi total value locked rises 38% in Q3 2026 to $95 billion: https://www.kucoin.com/news/flash/defi-total-value-locked-rises-38-in-q3-2026-to-95-billion
- OneBullEx, DeFi TVL and 2026 hacks: https://www.onebullex.com/news/articles/defi-tvl-hits-92-83-billion-as-2026-hacks-reach-2-345-billion
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- Hypebeast, OpenSea sets new record with $5 billion in monthly NFT sales: https://hypebeast.com/2022/2/opensea-new-record-nft-sales-january-2022
- MEXC News, NFT market volumes in 2025 (CryptoSlam data): https://www.mexc.com/news/248876

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