

BIP39: Secure Seed Phrases for MetaMask & Crypto Wallets

Mnemonic recovery phrases and wallet security best practices



What Is BIP39?

BIP39 (Bitcoin Improvement Proposal 39) is the industry standard for cryptocurrency wallet recovery. Instead of complex cryptographic keys, users backup their wallets using 12 to 24 simple English words.

These words, selected from a list of 2048 options, encode your wallet's master seed through a clever combination of entropy generation, checksum validation, and key derivation (BIP32/BIP44).

How It Works

Your wallet generates random data (entropy), calculates a checksum, and converts the result into words

These words are processed through PBKDF2 to create a 512-bit seed, which generates all your addresses and private keys.

One phrase = unlimited addresses, all recoverable on any BIP39-compatible wallet like MetaMask, Ledger, or Trust Wallet.

Security Best Practices

Never store digitally. Write your phrase on paper or engrave it on metal. No screenshots, no cloud storage.

Anyone with your seed phrase controls your funds—permanently. Legitimate services never ask for your phrase.

Phishing scams are common, so stay vigilant. Consider adding a BIP39 passphrase (25th word) for extra security, but remember: lose the passphrase, lose the wallet.

MetaMask Setup & Backup

1. Install MetaMask and create a new wallet.
2. Write down your 12-word phrase immediately—no digital copies.
3. Verify your backup by entering the words when prompted.
4. Store securely in a safe or safety deposit box.
5. Test recovery on a separate device before transferring large amounts.

Common Mistakes to Avoid

- ✗ Taking screenshots "just temporarily" — they sync to cloud backups.
- ✗ Confusing your wallet password with your seed phrase — they're different.
- ✗ Sharing your phrase with "support" — always a scam.
- ✗ Writing down the wrong words — double-check spelling and order.

FAQ

Lost phrase? Funds are gone forever. **12 vs 24 words?** 12 is secure for most users. **Can phrases collide?** Probability is 1 in 2^{128} —essentially impossible.

BIP39 empowers true ownership of digital assets. By following these practices—offline backups, secure storage, and vigilance against phishing—you can confidently manage cryptocurrency without relying on third parties. For more resources, visit bip39-phrase.com

Research Dataset: BIP39 Seed Phrases

mosquito syrup yellow exist sunny seat below copy artist undo tourist decline	time manage range ski barrel silver supply steak ritual soon mistake apart	birth remain predict theme dog laundry industry will culture ask radar route	parrot card surge midnight beauty ten feed sniff man advance burden join
pact latin garment urge weekend three hill tilt turn auto hip play	tumble donate depart screen type grow blouse size polar length risk vibrant	trust retire secret mechanic immune someone settle meadow goose trim special pizza	wish plastic inch maze visit holiday frozen expand fade state wall lunar
option novel mango sleep mind elevator belt unknown develop puzzle giraffe obscure	wire control speak dinner same old rotate amazing tiger heavy jaguar ahead	lesson liquid resist erupt van pigeon ice winter refuse myth road alarm	runway clean cancel fault unaware dizzy arrest rare can social digital want
vast bring kiss creek canvas sausage celery stay explain monster scrap fish	ecology cry bitter goat error worth engage various carry absent fit gravity	wonder buzz clever occur planet own film fiber analyst desert awesome loop	name shoulder melody habit base addict match warm brisk rigid eager sting
rural phone tape butter blanket lab write figure infant car toilet good	home quit zebra saddle kit sand right always movie object hover strike	humble run leader deal fragile attend fuel mountain orphan book laptop fox	roast lecture swim decade shop quarter exhaust area situate about bench fat
path frog black goddess balance find like inside record waste boat deputy	aerobic minimum all quiz orchard enable priority oil display scorpion pole struggle	entry fly fabric leisure bronze require amount amateur welcome primary click utility	exact exhibit virus false account denial amused tired tree region know lumber
odor strategy execute spray clinic safe park brave embark link awful victory	barely similar hold timber shine check nose merry pool soul learn end	fame weather sudden angry flavor case silent impact tank category brand coast	noodle joke reflect step misery kitten decrease wife invite nominee biology cricket
lawn antique major crash group cream large solar tomato slight clarify crime	live athlete tattoo dash gap model vendor universe blood town ready still	foster cycle hollow spike drop put trend hand frost neutral edge twin	food donkey egg immense rather warrior dilemma spin brass walk such cactus
essence sentence loan cross prosper body assist aisle mixed horse siren rapid	wide dance wagon august friend daring inherit tribe memory spoon tenant happy	dove index evil stadium cattle opera erosion pupil unveil better borrow mirror	elegant dismiss best slogan clog argue client view climb dignity bacon transfer
admit exile snake above basic genius ostrich elder echo empty camera jungle	ramp smoke energy fashion search nuclear oven almost crumble nothing cute husband	demand paper night wink provide away box dry gift thank theory violin	segment split short march exchange water cabin noble present oxygen inflict comfort
hurry capital uncover pause income zone bind wool venture measure marine field	shed cheese when duty hope peasant human fortune turtle nut lucky first	bird trade science grid edit child change obvious wrong sick flush jealous	poverty agree equal color post wrap veteran slot add arm aware master

elephant process churn forum system nurse crazy earth collect hard tobacco else	cousin cradle ship word direct nephew ball seek blush slender orbit engine	coral erase drum ticket stand depend magic diary chef buyer six cup	cruise trial camp adult wealth satoshi shove anchor point woman casino supreme
canal layer clutch audit danger people agent result forest later icon patrol	teach cost aspect comic pottery foil practice census unusual ensure hello vacuum	blame ill employ face lens wasp token breeze luxury maple order curve	burst alien raven tide intact awake general pumpkin couch plate repeat off
tongue metal arrive actor because banana bag radio gadget candy eternal around	decide dentist crush vote stool basket abandon neglect kite grant salon dice	reason fall grape twice strong chronic orient tail asset legal bounce chair	much differ illegal whale silk recall then ankle owner apology security estate
among purchase usage inner chaos nasty debris omit broken thumb sign bike	merge parade desk walnut cinnamon topic enforce next sail minor dune sea	boring fluid arctic alter foam viable leave maid useless robot code artwork	cliff depth network modify eight main program enough moment brush shield regular
truth glass tonight catalog glad drive fee patch scheme history fantasy alpha	cover method simple charge naive affair load busy dinosaur hobby boil sheriff	punch price fold page lazy guess between dream identify despair inject round	vocal say cluster valley act milk east feature hub trigger voice sight
ridge pelican month clay very coin they ranch move wine piece ignore	gain cherry royal market praise grunt cave palace era keen filter sister	cake hurdle kangaroo dynamic humor mansion narrow fog obtain mesh pond gas	urban pistol year device text budget paddle soccer twelve bar diamond muscle
message gun dish miracle erode replace another improve language north muffin soup	absurd combine balcony remember toy forget bunker genuine decorate antenna blast emerge	mouse carpet clump flip noise country patient tuition idle scatter embrace buddy	prefer quick subway atom profit upgrade green west gorilla canoe tower valid
light become begin purity wise output casual coil toddler sound scare twenty	sunset eagle outside village treat report claim assume surround taste effort cruel	detail marriage umbrella target buffalo image chuckle clap scissors smart hint pet	pair survey allow style alley nation behave stairs aim cable spell inhale
famous try pear enjoy rug column arena episode mobile unhappy youth frown	soda crater absorb century brief lizard miss surface labor wear volcano ripple	junior orange again pill animal track imitate what exercise sphere faculty bean	negative public original island congress speed favorite indicate cause travel wing damp
rail firm wood razor hire canyon middle permit hamster million vehicle impulse	gown idea already pyramid success reward betray dolphin maximum build funny oval	kitchen april impose flee tackle leg divide uphold remove pluck beyond elite	gold person couple table access flower arrange choice tennis note neither recipe
print retreat loud voyage crop normal kingdom work cloth craft cloud half	flat pencil smooth feel banner mercy trap fatigue spoil junk october cash	enroll unfair title panic stick problem easy galaxy destroy bridge slush fatal	chicken toast blossom mail mutual avoid degree broom focus love stumble street
question mixture sorry	hammer law cotton rule	input cigar ketchup cook	wedding great unlock

hunt lift blind cement solution material action race invest	broccoli snow local machine swap ancient room giant	weird lake abuse bomb grit expose artefact guard	place diagram resource lawsuit monkey ghost moon piano autumn
call sponsor unit powder submit chalk badge top found level until popular	hour civil hundred stereo outdoor ring item tray yard version pitch height	crowd thing dumb jacket genre extra girl oak spot custom tube hood	senior opinion derive mean mom anxiety thought insane legend vanish sustain city
olive joy critic penalty mix multiply knee baby consider acoustic gesture spend	father flame current diet spare wrestle often release defense brick service organ	few push family gate leopard soldier lottery axis need series issue toe	topple meat scale art mimic since help upon phrase reform return spider
afraid river review devote game long design tomorrow doll member limit debate	floor life subject rain vicious raise before trick excuse purse soap wheat	lunch fury silly jewel rebel small real excite high domain crouch crunch	pulse ginger arch crisp second shift weapon bulk rack skirt offer useful
liberty annual knock swarm hair plug lava notable pipe valve glory sport	gospel equip have script rescue drill honey daughter little rebuild captain attitude	cheap inquiry shallow appear indoor champion south behind bamboo element inspire stock	gossip menu tissue fetch witness spring there notice logic protect pen february
airport satisfy hurt okay lock disease tiny endorse today rude chunk jelly	during spy lamp damage hazard chimney deliver rely glare rhythm prison stage	tool front mention thunder flash job solid sing make motion enact involve	enrich lobster army pioneer hockey flag drama medal grief picnic throw fossil
detect swallow capable manual office frequent left sad embody sauce circle sibling	peanut deny head that border virtual skin crew stuff blur alone hat	salmon clerk discover reopen roof spatial guide slab tone concert guitar symptom	staff exclude media evolve acid section include tooth quote siege give ordinary
scrub vital source two asthma divorce cat company cool luggage purpose trip	insect flock jeans into traffic salute private quantum brown total journey uniform	song coyote side bundle ceiling olympic eyebrow panther illness address acquire able	swamp seven fruit educate festival truly photo choose either proof wrist tip
adjust typical suggest foot steel panel solve cannon hedgehog emotion glove warfare	school trash start task more potato obey fire talent slam core symbol	lyrics curtain fever mask swear divert spirit response gaze board fancy where	hybrid farm nature wild kid harsh final tell raccoon bullet observe library
gather globe skull picture furnace dial caught video unable plunge dutch grass	pave square expect fan gallery together boy forward grocery blade power host	cage gasp math leaf ability economy december museum letter come diesel apple	width scene faith vivid over rubber test horror stable jazz beef poet
proud pretty accident inform margin angle void example crystal property random frame	police myself assault entire lemon hospital any pledge tent attract vapor bargain	bulb dwarf exit sadness mystery spice judge payment bicycle pulp fine grain	garage magnet air mother rough close never achieve wash fresh visual aunt
keep resemble suit battle finger awkward lady switch scan evidence eye	dust announce actual also early sort oblige suffer pull shaft garbage	isolate talk float essay brother mad this shell attack reject course	share tornado upset anger once remind minute coach huge

disagree	demise	federal	benefit gym kind
physical gloom save only boost shoot napkin taxi wreck other student trouble	velvet giggle corn fork health chest enemy jar chat rival setup tragic	draft relief win future weasel uncle music alcohol approve world thrive select	motor toward shoe clip matter poem innocent slide raw disorder dawn day
possible salt wolf fringe hidden fitness blue bachelor drift tunnel rookie usual	zoo pink garlic receive hero one across shadow glance number extend earn	double lonely trophy ribbon prevent describe adapt tuna file fence portion bread	sense certain elbow fiction tag wisdom wheel escape electric verify license bubble
delay avocado sock chase moral prepare guilt express just govern render used	shrimp stove conduct alert lounge glimpse near hungry squirrel bleak limb crack	reveal bracket tortoise stone duck sugar venue pony cube trumpet soft kiwi	bottom expire horn cupboard skill mule merit volume clown mandate wait label
author bright bus harbor sample increase brain cart credit rally super pig	must dad grace burger chapter deer key relax juice surprise vintage fun	rib winner advice sell donor abstract carbon position window suspect wave romance	confirm distance swing dress define season open coffee vacant nerve salad common
snap project deposit female smile rice glue age cushion ozone quality flight	empower visa kidney convince glide drip team claw list shuffle copper castle	lion calm hole regret oppose seminar nest ivory web follow sketch arrow	prize palm pass laugh rocket matrix average cereal unique injury install hotel
young correct turkey space reunion true knife jump actress pride liar defy	pudding promote kick shy armor helmet spawn way verb slow business riot	onion faint armed pepper envelope party vague auction finish news renew catch	sweet glow cabbage ugly afford inmate answer exotic stomach you session rich
drastic net ride vault curious worry marble mammal interest iron cargo oyster	rose mass document clock force parent spread summer endless wage easily hawk	draw snack toss melt dirt connect caution stamp use initial sure zero	under grab recycle dragon term loyal gauge skate rifle heart twist slice
rent perfect lend club album bless whip door slim produce online beach	sun enlist panda pilot torch unfold shock fiscal monitor ethics story swift	scout peace boss update cram vessel rabbit crane chief puppy citizen coconut	rate ocean harvest crawl reduce pattern enhance evoke squeeze truck enter fix
bone crucial upper outer stem nice garden excess doctor bid mushroom shiver	train bonus wet gentle believe shrug now drink repair accuse please seed	robust dose neck hen morning sword whisper ladder chunk film swear magic	