Redstone Ore   re article feedback

For other uses, see Redstone.

Redstone ore is the ore block from which redstone is obtained.

Deepslate redstone ore is a variant of redstone ore that can generate in deepslate and tuff blobs.
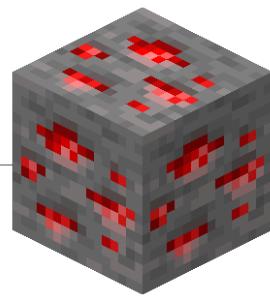
Contents

Redstone Ore

Redstone Ore
Deepslate Redstone Ore

Renewable	No
Stackable	Yes (64)
Tool	
Blast resistance	3
Hardness	**Redstone Ore**: 3 **Deepslate Redstone Ore**: 4.5
Luminous	Yes (9) (when lit)
Transparent	No
Flammable	No
Catches fire from lava	No
Map color (*JE*)	⬜ 11 STONE

Navigation

Obtaining

Breaking

Redstone ore must be mined with an iron pickaxe or higher to drop redstone dust. When mined, it drops 4–5 redstone dust. It is affected by the Fortune enchantment, dropping 4-6, 4-7, or 4-8 redstone respectively with Fortune I, II, and III (averaging at 6 redstone dust with Fortune level 3[1] [2]). If mined with Silk Touch, it drops itself instead of redstone dust.

Block	🟥 Redstone Ore	🟥 Deepslate Redstone Ore
Hardness	3	4.5
Tool	⛏	⛏
Breaking time (sec)[A]		
Default	15	22.5
Wooden	7.5	11.25
Stone	3.75	5.65
Copper	3	4.5
Iron	0.75	1.15
Diamond	0.6	0.85
Netherite	0.5	0.75
Golden	1.25	1.9

Legend

- ▪ ☐ incorrect tool, drops nothing
- ▪ ☐ correct tool, drops nothing or something other than the block itself
- ▪ ☐ correct tool, drops the block itself
- ▪ *italicized* can be instant mined

1. These durations ignore other influential factors (e.g., Mining Fatigue) and are measured in seconds. For more information, see Breaking § Speed.

Natural generation

See also: Ore (feature)

Redstone ore can generate in the Overworld in the form of ore features. Redstone ore generates in two batches per chunk. The first batch attempts to generate 4 times per chunk, in blobs of 0–10, evenly from levels -64 to 15. The second batch attempts to generate 8 times per chunk, in blobs of 0–10, from levels -63 to -32, being more common the lower the elevation.
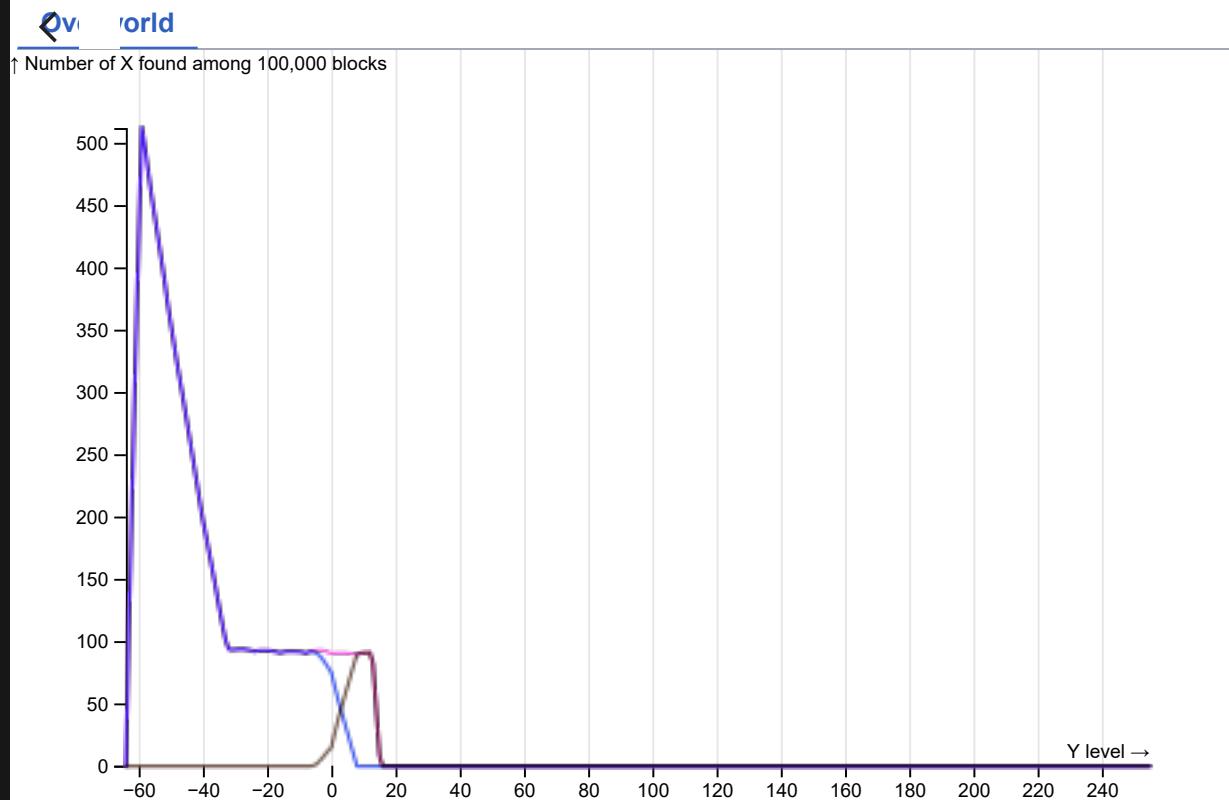
Redstone ore can replace stone, andesite, diorite, granite, tuff, and deepslate. Any redstone ore that

replaces tuff or deepslate becomes deepslate redstone ore.

Unlike most ores, redstone ore does not generate less when exposed to air.

Block distribution for Redstone Ore and Deepslate Redstone Ore in Java Edition 1.21.7
☑ Select all ☑ Total ☑ Redstone Ore ☑ Deepslate Redstone Ore

☐ Logarithmic scale
Slight difference in the Y-coordinate represents a large change in the relative frequency of a block type, making it useful to see small changes on the graph when there is a large spike.
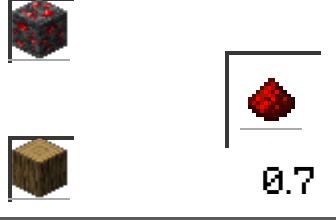
Usage

The primary usage of redstone ore is to mine it for redstone dust.

Lit Redstone Ore

Lit Redstone Ore is a block state of Redstone Ore or Deepslate Redstone Ore. It produces the light level of 9 and emits bright red powered redstone particles. Redstone Ore enters this state instantly when it is clicked by a player (including placing any actions such as placing or breaking, and not including middle click) or contacted by an entity on the top side. There are some exceptions, including a sneaking player, projectiles, shulkers, and the ender dragon. Lit Redstone Ore has a slightly lighter texture, although this is often hard to know in dark areas due to it emitting light, and hard to see in light areas. This effect continues until the redstone ore block receives a random block tick (averaging 68.27 seconds). This effect does not actually produce redstone power, but the block changes can be detected with an observer or a block update detector.

Subsequent clickings on a redstone ore block causes it to emit an extra burst of particles per click.

Smelting ingredient

Name	Ingredients	Smelting recipe	[hide]
Redstone Dust	Redstone Ore or Deepslate Redstone Ore + Any fuel		0.7

Note Blocks

Redstone ore can be placed under note blocks to produce "bass drum" sounds.

Sounds

Redstone ore

Java Edition:

			stone sound type					[hide]
Sound	**Closed captions**	**Source**	**Description**	**Identifier**	**Translation key**	**Volume**	**Pitch**	**Attenuation distance**
	Block broken	Blocks	Once the block has broken	block .stone .break	subtitles .block .generic .break	1.0	0.8	16
	Block placed	Blocks	When the block is placed	block .stone .place	subtitles .block .generic .place	1.0	0.8	16
	Block breaking	Blocks	While the block is in the process of being broken	block .stone .hit	subtitles .block .generic .hit	0.25	0.5	16
	Something falls on a block	*Entity-Dependent*	Falling on the block with fall damage	block .stone .fall	subtitles .block .generic .fall	0.5	0.75	16
	Footsteps	*Entity-Dependent*	Walking on the block	block .stone .step	subtitles .block .generic .footsteps	0.15	1.0	16

Bedrock Edition:

	stone sound type						[hide]
Sound	Closed captions [*upcoming: BE 26.0*]	Source	Description	Identifier	Translation key [*upcoming: BE 26.0*]	Volume	Pitch
	Block broken	Blocks	Once the block has broken	`dig .stone`	`subtitles.block .generic.break`	1.0	0.8-1.0
	Block broken	Blocks	When the block is placed	`dig .stone`	`subtitles.block .generic.break`	1.0	0.8-1.0
	Block breaking	Blocks	While the block is in the process of being broken	`hit .stone`	`subtitles.block .generic.hit`	0.37	0.5
	Footsteps	Players	Falling on the block with fall damage	`fall .stone`	`subtitles.block .generic .footsteps`	0.4	1.0
	Footsteps	Players	Walking on the block	`step .stone`	`subtitles.block .generic .footsteps`	0.3	1.0
	Footsteps	Blocks	Jumping from the block	`jump .stone`	`subtitles.block .generic .footsteps`	0.12	1.0
	Footsteps	Blocks	Falling on the block without fall damage	`land .stone`	`subtitles.block .generic .footsteps`	0.22	1.0

Deepslate redstone ore

Java Edition:

	deepslate sound type							[hide]
Sound	Closed captions	Source	Description	Identifier	Translation key	Volume	Pitch	Attenuation distance
	Block broken	Blocks	Once the block has broken	block .deepslate .break	subtitles .block .generic .break	1.0	0.8	16
	Block placed	Blocks	When the block is placed	block .deepslate .place	subtitles .block .generic .place	1.0	0.8	16
	Block breaking	Blocks	While the block is in the process of being broken	block .deepslate .hit	subtitles .block .generic .hit	0.25	0.5	16
	Something falls on a block	*Entity-Dependent*	Falling on the block with fall damage	block .deepslate .fall	subtitles .block .generic .fall	0.5	0.75	16
	Footsteps	*Entity-Dependent*	Walking on the block	block .deepslate .step	subtitles .block .generic .footsteps	0.15	1.0	16
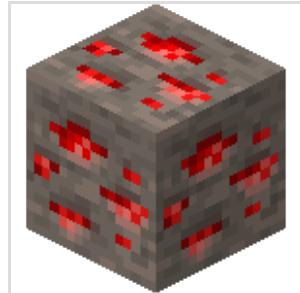
Bedrock Edition:

	deepslate sound type						[hide]
Sound	Closed captions [*upcoming: BE 26.0*]	Source	Description	Identifier	Translation key [*upcoming: BE 26.0*]	Volume	Pitch
	?	Blocks	Once the block has broken	dig .deepslate	?	1.0	0.8-1.0
	?	Blocks	When the block is placed	place .deepslate	?	1.0	0.8-1.0
	?	Blocks	While the block is in the process of being broken	hit .deepslate	?	0.3	0.5
	?	Players	Falling on the block with fall damage	fall .deepslate	?	0.4	1.0
	?	Players	Walking on the block	step .deepslate	?	0.3	1.0
	?	Players	Jumping from the block	jump .deepslate	?	0.12	1.0
	?	Players	Falling on the block without fall damage	land .deepslate	?	0.22	1.0

Data values

ID

Java Edition:

A redstone ore that glows and emits particles in the dark.

Name	Identifier	Form	Block tags	Translation key [hide]
 Redstone Ore	`redstone_ore`	Block & Item	redstone_ores mineable/ pickaxe needs_iron_tool	`block.minecraft` `.redstone_ore`
 Deepslate Redstone Ore	`deepslate_redstone_ore`	Block & Item	redstone_ores mineable/ pickaxe needs_iron_tool	`block.minecraft` `.deepslate_redstone_ore`

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID[i 1]	Translation key [hide]
 Redstone Ore	`redstone_ore`	73	Block & Giveable Item[i 2]	Identical[i 3]	`tile.redstone_ore.name`
 Lit Redstone Ore	`lit_redstone_ore`	74	Block & Ungiveable Item[i 4]	Identical[i 3]	—

 Deepslate Redstone Ore	`deepslate_redstone_ore`	658	Block & Giveable Item[i 2]	Identical[i 3]	`tile`
					`.deepslate_redstone_ore`
					`.name`

 Lit Deepslate Redstone Ore	`lit_deepslate_redstone_ore`	659	Block & Ungiveable Item[i 4]	Identical[i 3]	—

1. ID of block's direct item form, which is used in savegame files and addons.
2. Available with /`give` command.
3. The block's direct item form has the same ID as the block.
4. Unavailable with /`give` command

Block states

See also: Block states

Java Edition:

Name	Default value	Allowed values	Description	[hide]
lit	false	false true	If the redstone ore is lit.	

Videos

History

There is an associated technical blocks page for the internal item form of this block; see Technical blocks/Lit Redstone Ore.

Java Edition

Java Edition Alpha			[hide]
v1.0.1		Added redstone ore in Seecret Friday Update 3.	
		The mining time of redstone ore takes far longer compared to other ores (4.5 seconds with iron pickaxe).	
v1.0.2_01		Lit redstone ore now emits red dust particles.	
July 7, 2010		Redstone ore now has a name (previously all redstone-related blocks had no official name).	

Java Edition			[hide]
1.0.0	**Beta 1.9 Prerelease 4**	Redstone ore and lit redstone ore can now be obtained by mining them using a tool enchanted with Silk Touch.	
	Beta 1.9 Prerelease 6	The mining time of redstone ore has been significantly reduced - it now has the same mining time as other ores.	
		Redstone ore can now be smelted in a furnace.	
		Lit redstone ore can no longer be obtained when mined using a tool with Silk Touch.	
1.3.1	**12w22a**	Mining redstone ore, along with other ores, now gives the player experience orbs. One stack of redstone ore gives roughly 10 levels of experience.	
Texture Update	**January 4, 2018 (https://twitter.com/JasperBoerstra/status/948841704223838208)**	A new texture for redstone ore has been proposed.	
1.14	**18w43a**	The texture of redstone ore has been changed.	
1.17	**21w06a**	The height limit was expanded down to Y=-64. Redstone ores are now generating from Y=-64 instead of Y=0.	
	21w07a	The texture of redstone ore has been changed.	
		Redstone ore now attempts to generate evenly between an altitude of Y=15 and Y=-64.[3]	
	February 17, 2021 (https://twitter.com/HenrikKniberg/status/1362095363314876418)	Henrik Kniberg shows grimstone variant of redstone ore.	
	February 18, 2021 (https://twitter.com/JasperBoerstra/status/1362396465470005251)	JAPPA shows new texture grimstone variant of redstone ore.	
	February 22, 2021 (https://twitter.com/JasperBoerstra/status/1363828589708382210)	JAPPA shows updated redstone ore and grimstone variant of redstone ore.	
	21w08a	Added deepslate redstone ore.	
		The texture of redstone ore has been changed again.	
		Added redstone_ores block tag.	

	21w08b	Redstone ore now attempts to generate twice: once, evenly between an altitude of Y=15 and Y=-64; and as a triangle spread, peaking at an altitude of -64 and generating below an altitude of Y=-32.[3]
	21w10a	The texture of deepslate redstone ore has been changed.
		Decreased the amount of redstone ore blobs.
	21w15a	All the changes to redstone ore generation in the previous 1.17 snapshots have been reverted, but they can be re-enabled with the Caves & Cliffs Prototype Data Pack.
1.18	Experimental Snapshot 1	Redstone ore once again generates the way it did in the 1.17 snapshots without the use of a data pack.

Bedrock Edition

Pocket Edition Alpha		[hide]
v0.1.0		Added redstone ore.
v0.4.0		Redstone ore added to creative mode.
v0.8.0	build 1	Redstone ore now drops redstone when mined.
v0.12.1	build 1	Redstone ore can now be obtained if mined with a pickaxe enchanted with Silk Touch.
v0.13.0	build 1	Redstone ore now emits light and red particles when walked on.
Bedrock Edition		[hide]
1.10.0	beta 1.10.0.3	The texture of redstone ore has been changed.
1.16.220 — Experiment — Caves and Cliffs	beta 1.16.220.50	The texture of redstone ore has been changed.
1.17.0 — Experiment — Caves and Cliffs	beta 1.16.230.52	Added deepslate redstone ore behind the Caves and Cliffs experimental gameplay.
	beta 1.16.230.56	In the Caves and Cliffs experimental gameplay, redstone ore now attempts to generate twice: once, evenly between an altitude of Y=15 and Y=-64; and as a triangle spread, generating from Y=31 to Y=-31.
1.17.0	beta 1.17.0.52	Now deepslate redstone ore generates without the Caves and Cliffs experimental gameplay.
1.18.0	beta 1.18.0.20	Removed "Caves and Cliffs" experimental toggle. New redstone ore generation are now available through normal gameplay.
		Redstone ore generation height has now been tweaked.
	beta 1.18.0.22	Redstone ore generation height has now been tweaked to be in parity with *Java Edition*.
1.20.30	Preview 1.20.20.21	Increased the blast resistance of deepslate redstone ore from 1.8 to 3.

Legacy Console Edition

Legacy Console Edition								[hide]
Xbox 360	**Xbox One**	**PS3**	**PS4**	**PS Vita**	**Wii U**	**Switch**		
TU1	**CU1**	**1.00**	**1.00**	**1.00**	**Patch 1**	**1.0.1**	Added redstone ore.	
TU7							Mining redstone ore now drops experience orbs.	
			1.90				The texture of redstone ore has been changed.	

New Nintendo 3DS Edition

New Nintendo 3DS Edition	[hide]
0.1.0	Added redstone ore.

Data history

Java Edition			[hide]
1.13	**17w47a**	The different block IDs for the redstone ore have been merged into 1 ID.	
		A lit block state has been added to redstone ore.	
		Prior to *The Flattening*, these blocks' numeral IDs were 73 and 74.	

Issues

Issues relating to "Redstone Ore" or "Deepslate Redstone Ore" are maintained on the bug tracker. Issues should be reported and viewed there (https://bugs.mojang.com/issues/?jql=project%20in%2 0%28MC%2C%20MCPE%29%20AND%20%28resolution%20is%20EMPTY%20OR%20resolutio n%20in%20%281%2C%202%2C%206%29%29%20AND%20%28summary%20~%20%22Redston e%20Ore%22%20OR%20summary%20~%20%22Deepslate%20Redstone%20Ore%22%29%20O RDER%20BY%20resolution%20DESC).
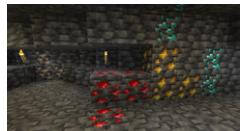
Gallery

Screenshots

Lots of ore.

A blob of redstone ore next to some lava.

Multiple natural blobs of redstone in to the cave.

Redstone ore in a mine.

4 blocks of redstone ore.

Naturally generated diamond and redstone ores in a cave.

Deepslate redstone ore and gold ore.
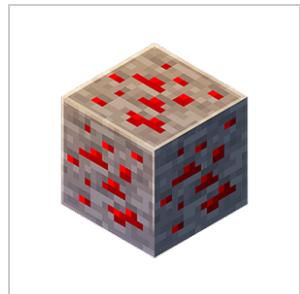

Multiple ores, found in a big cave.

Redstone ore next to lava and granite.

Naturally generated diamond ore, redstone ore and lapis lazuli ore found in a ravine.
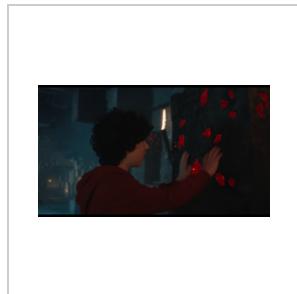
In other media

Redstone ore as it appeared in *Minecraft Earth*

Redstone ore as it appears in *Minecraft Legends*

Redstone ore as it appears in *A Minecraft Movie*

Redstone ore light by ThinkGeek

See also

- Mechanisms
- Traps

References

1. https://web.archive.org/web/20210311215700/https://imgur.com/a/UnIGPKn
2. https://web.archive.org/web/20230509054859/https://imgur.com/a/GirweJL
3. MC-216101 — Redstone ore generates with a flat distribution below Y=12 — resolved as "Fixed".

External links

- "Block of the Month: Redstone Ore" (https://www.minecraft.net/en-us/article/redstone-ore) by Duncan Geere – Minecraft.net, November 17, 2023.

Navigation

Ore			[hide]
🪨 **Coal**	🪨 Ore (🪨 Deepslate)	🪨 Coal	
🟫 **Copper**	🟫 Ore (🟫 Deepslate)	🟫 Raw	🔶 Nugget
⬜ **Iron**	⬜ Ore (⬜ Deepslate)	🟤 Raw	⚪ Nugget
🟡 **Gold**	🟡 Ore (🟡 Deepslate	🟥 Nether) 🟨 Raw	🟡 Nugget
🔴 **Redstone**	🔴 Ore (🔴 Deepslate)	🔴 Dust	
🟢 **Emerald**	🟢 Ore (🟢 Deepslate)	🟢 Emerald	
🔵 **Lapis Lazuli**	🔵 Ore (🔵 Deepslate)	🔵 Lapis Lazuli	
🟦 **Diamond**	🟦 Ore (🟦 Deepslate)	🟦 Diamond	
⬜ **Nether Quartz**	🟫 Ore ⬜ Quartz		
⬛ **Netherite**	🟫 Ancient Debris 🟫 Scrap		

🔴 **Redstone**	[hide]
Redstone circuits & tutorials	[show]

Redstone components   [hide]

	Block of Redstone Buttons (Wooden Stone Polished Blackstone) Daylight Detector
	Detector Rail Jukebox Lectern Lever Lightning Rod Observer Pressure Plates
Power emission	(Wooden Stone Polished Blackstone Light Weighted Heavy Weighted)
	Redstone Comparator Redstone Torch Sculk Sensor (Calibrated) Target Trapped Chest Tripwire Hook (~~ Tripwire)
Signal transmission	Redstone Wire Redstone Repeater Conductive and non-conductive blocks
Item and entity transportation	Allay Boat with Chest (Bamboo Raft) Copper Golem Crafter Dispenser Dropper Hopper Minecart (with Chest with Furnace with Hopper) Rail (Activator Powered) Water (Bubble Column)
Comparator-readable	Barrel Bee Nest (Hive) Brewing Stand Cake Cauldron Chest (Copper) Chiseled Bookshelf Composter Copper Golem Statue Decorated Pot End Portal Frame Furnace (Blast Smoker) Item Frame (Glow) Respawn Anchor Shulker Box
Observer-related	Redstone Ore (Deepslate) Scaffolding Sculk Catalyst Sculk Shrieker Wall
Pistons/related	Piston (Sticky) Honey Block Slime Block Movable and immovable blocks
Sculk sensor-related	Block of Amethyst Wool (Carpet)
Mechanisms/misc.	Armor Stand Bell Big Dripleaf Copper Bulb Creaking Heart Doors (Copper Iron Wooden) Fence Gate Head Note Block Redstone Lamp Shelf TNT (Minecart) Trapdoors (Copper Iron Wooden)
Creative or commands only	Command Block (Minecart) Minecart with Monster Spawner Structure Block Test Block

Blocks   [hide]

Structural   [show]

Ornamental   [show]

Natural   [hide]

Sediment/Soil	Clay Dirt (Coarse Grass Block Mycelium Podzol Rooted Dirt) Gravel Mud Nylium (Crimson Warped) Sand (Red) Soul Sand (Soil)
Misc. rock	Bedrock Magma Block Obsidian Calcite Pointed Dripstone (Block)
Ore/Mineral	Amethyst Bud (Cluster Budding Amethyst) Ancient Debris Coal Ore (Deepslate) Copper Ore (Deepslate Raw Block) Diamond Ore (Deepslate) Emerald Ore (Deepslate) Gold Ore (Deepslate Nether) Iron Ore (Deepslate Raw Block) Lapis Lazuli Ore (Deepslate) Nether Quartz Ore

Plant

Redstone Ore (Deepslate)
Azalea (Flowering) Bamboo (Shoot) Beetroots
Big Dripleaf (Small) Bush Cactus Carrots Cave Vines
Chorus Plant (Flower) Cocoa Creaking Heart Dead Bush
Fern (Large) Firefly Bush Hanging Roots Leaf Litter
Leaves Lily Pad Mangrove Propagule Mangrove Roots
(Muddy) Melon (Stem) Moss Block (Carpet)
Pale Hanging Moss Pale Moss Block (Carpet) Potatoes
Pumpkin (Carved Stem) Resin Clump Saplings
Seagrass (Tall) Short Dry Grass (Tall) Short Grass (Tall)
Sugar Cane Sweet Berry Bush Vines Wheat Crops
(Hay Bale)

Flower

Allium Azure Bluet Blue Orchid Cactus Flower
Cornflower Dandelion Eyeblossom Lilac Lily of the Valley
Oxeye Daisy Peony Pink Petals Pitcher Plant (Crop)
Poppy Rose Bush Spore Blossom Sunflower Torchflower
(Crop) Tulips Wildflowers Wither Rose

Fungus & Related

Nether Fungi (Crimson Warped) Glow Lichen Mushrooms
(Brown Red Blocks Stem) Nether Sprouts
Nether Wart Wart Block (Nether Warped) Crimson Roots
Warped Roots Shroomlight Twisting Vines Weeping Vines

Fauna & algae

Coral (Dead) Coral Blocks (Dead) Coral Fans (Dead)
Dried Ghast Kelp (Dried Block) Sea Pickle

Fauna/Related

Bee Nest Bone Block Cobweb Dragon Egg Frogspawn
Infested Blocks Sniffer Egg Turtle Egg

Sculk

Sculk Sculk Catalyst Sculk Sensor (Calibrated)
Sculk Shrieker Sculk Vein

Fluid & Related

Lava Water (Bubble Column) Ice (Blue Packed)
Snow (Powder Block)

Non-physical

Air (Cave[JE only] Void[JE only]) Invisible Bedrock[BE & edu only]
Fire (Soul)

Utility		[show]
Creative or commands only		[show]
Removed		[show]
Unused		[show]
Unimplemented		[show]
Joke		[show]
Extreme metadata variants		[show]

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