Sculk Catalyst   re article feedback

A sculk **catalyst** is a sculk block that "blooms" when a mob or player dies nearby, which may convert nearby blocks to sculk blocks (except for more sculk catalysts).

Sculk Catalyst	
Renewable	Yes
Stackable	Yes (64)
Tool	
Blast resistance	3
Hardness	3
Luminous	Yes (6)
Transparent	No
Flammable	No
Catches fire from lava	No
Map color (*JE*)	29 COLOR_BLACK

Contents

Obtaining

Breaking

A sculk catalyst can be mined with any tool, but hoes are the quickest. It drops itself only if mined with any tool enchanted with Silk Touch. It drops 5 experience if mined without Silk Touch.

Block	Sculk Catalyst
Hardness	3
Tool	⚒
Breaking time (sec)[A]	
Default	4.5
⚒ **Wooden**	2.25
⚒ **Stone**	1.15
⚒ **Copper**	0.9
⚒ **Iron**	0.75
⚒ **Diamond**	0.6
⚒ **Netherite**	0.5
⚒ **Golden**	0.4

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

Sculk catalysts are generated within the deep dark biome.

Block distribution for Sculk Catalyst in Java Edition 1.21.7

Sculk Catalyst

Overworld

↑ Number of X found among 100,000 blocks

Y level →

☐ 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.
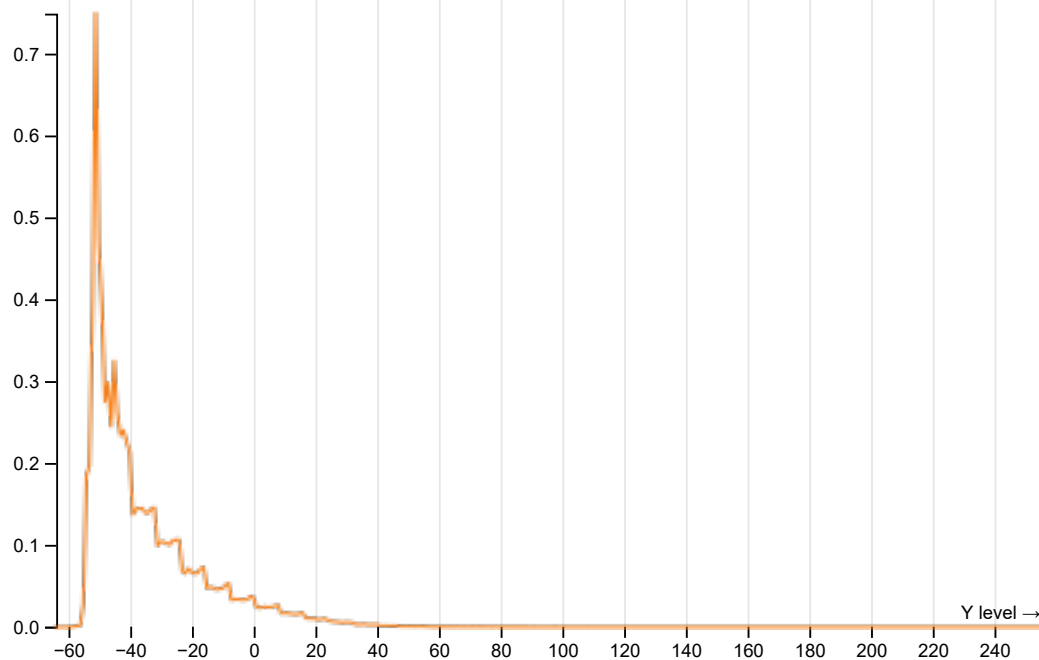
Mob loot

A underlinewarden drops a single sculk catalyst upon death, unaffected by Looting. This is the only renewable way to obtain sculk catalysts.

Java Edition:

Decimal Fraction Distribution   Expectation

Mob	Quantity / Chance / Average											
	Default			Looting I			Looting II			Looting III		
Warden	1	100.00%	1.00	1	100.00%	1.00	1	100.00%	1.00	1	100.00%	1.00

Bedrock Edition:

Decimal Fraction Distribution   Expectation

Mob	Quantity / Chance / Average											
	Default			Looting I			Looting II			Looting III		
Warden	1	100.00%	1.00	1	100.00%	1.00	1	100.00%	1.00	1	100.00%	1.00

Generated loot

Item	Structure	Container	Quantity	Chance	[hide]
Java Edition and *Bedrock Edition*					
Sculk Catalyst	Ancient City	Chest	1–2	16.1%	

Usage

Sculk catalysts convert experience into sculk veins, sculk sensors, and sculk shriekers, and use experience to convert many natural blocks into sculk.

Blooming

When a living entity (a mob or player, including ender dragons [1][2], withers, and wardens) dies near a sculk catalyst by any means, it blooms. This **sculk bloom** turns the mob into sculk charges based off its natural experience drops. Sculk charges grow into new sculk blocks, sensors and shriekers. Sculk blocks are always produced, with up to 1 sculk block per experience point. A sculk charge also has a 9% chance to grow a sculk sensor, and a 1% chance to grow a sculk shrieker.

A bloom occurs for the death of any living entity, and can even consume multiple entities at once. A sculk bloom cannot occur if the entity is not directly above a solid block or if the entity is below the sculk catalyst. A sculk farm can be made using pointed dripstone as long as the sculk catalyst is on the same level as the pointed dripstone.

During a sculk bloom, the catalyst gives off soul particles, and creates a patch of sculk blocks with sculk veins around them. Sculk blooms can replace blocks in the `sculk_replaceable` tag, including the surface materials of most of the biomes in all the Overworld, the Nether, and the End.

Sculk catalyst blooming.

Sculk catalyst detection range.

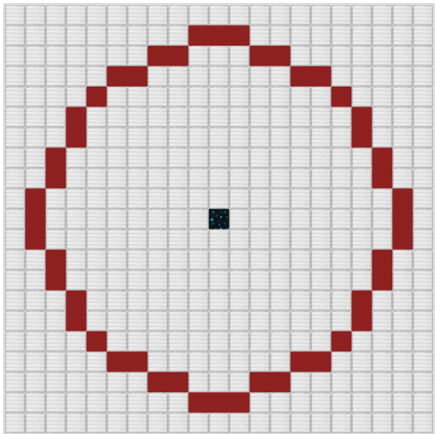### Blooming range

A sculk bloom occurs for the death of any living entity within a Euclidean distance of 8 blocks in *Java Edition* or 10 blocks in *Bedrock Edition* from a sculk catalyst.

If the entity dies near multiple sculk catalysts, only the nearest sculk catalyst blooms.
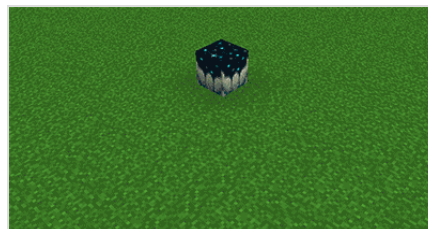
Sculk charges

When a living entity (a player or mob), is consumed by a sculk bloom, it won't drop experience, because the sculk bloom event converts the entity's experience into **sculk charges**. One experience point is worth one sculk charge. These charges are used to convert the block beneath the entity into a sculk block. If the block is already a sculk block, or if there are extra sculk charges, the sculk block absorbs the sculk charges. Up to 1000 charges can be present in one block.

It turns the blocks around the dead Mob into sculk or sculk veins.

The sculk charge in a block is lost when the block is destroyed or broken.

Sculk growth

Sculk growth is an event where a sculk bloom starts on a non-sculk block. The sculk growth first tries to convert the charged block into a sculk block. The following blocks can be converted:

- Stone
- Granite
- Andesite
- Diorite
- Tuff
- Calcite
- Deepslate
- Dripstone Block
- Terracotta
- Netherrack
- Nylium
- Basalt
- Smooth Basalt
- Blackstone
- End Stone
- Gravel

- Sand
- Red sand
- Sandstone
- Red Sandstone
- Dirt
- Grass Block
- Mycelium
- Podzol
- Coarse Dirt
- Rooted Dirt
- Clay
- Moss Block
- Pale Moss Block
- Mud
- Muddy Mangrove Roots
- Soul Sand
- Soul Soil

In *Java Edition*, these blocks are marked under the `sculk_replaceable` tag.

Sculk growth can grow all of the sculk family blocks excluding more sculk catalysts. If the charged block can't be converted, sculk veins grow on the block instead. If sculk veins can't grow, the sculk charge is removed and nothing happens. Each sculk block costs 1 experience to grow. Charge can also be used to create sensors or shriekers, or can be lost to decay.

When a sculk block is grown, it also tries to grow up to 20 sculk veins on every face of every adjacent block. A sculk vein costs 1 sculk charge when it grows on a block that cannot be converted into sculk.

Sculk growth can't happen on a block that is completely surrounded by blocks unless some of those blocks are sculk veins.

Sculk veins are never placed on the sides of a sculk block and are removed when the block they are

attached to is converted to a sculk block.

Discharging

Every other game tick, sculk blocks and veins **discharge** excess sculk charges. This discharge can cause the sculk charge to spread across a patch of sculk blocks and grow the patch larger.

Every other game tick, when sculk blocks or veins discharge, they transfer all of their sculk charges to a random adjacent block. The adjacent block must be a sculk block, a sculk vein, or one of the blocks that is sculk_replaceable. If there are no adjacent blocks to discharge to, the sculk charge simply stays where it is and eventually decays.

Each time a sculk block is charged, it discharges again. This causes sculk charges to move like electricity in a daisy chain. Sculk charges from different sculk blocks and veins tend to cluster together if there are enough charges, similar to how water collects in a valley or river. Sculk charges keep moving like this until they run out due to converting blocks, constructing shriekers and sensors, or decaying.

If a sculk charge keeps discharging in the same area without creating new sculk family blocks, it decays.

Every time a sculk block or vein discharges, it has a 9% chance to grow a sculk sensor, and a 1% chance to grow a sculk shrieker.

Sculk sensors and sculk shriekers cannot receive sculk charges and are only produced by them.

Sculk sensors and shriekers cannot grow if there are 2 or more sculk sensors and shriekers within a 9×3×9 box, with the bottom center of the box centered on the sculk bloom's origin (or within -4,0,-4 and 4,2,4 in relative coordinates).

Sculk shriekers generated by sculk growth won't summon wardens, and they shriek more frequently due to their can_summon tag being set to false.

Blooming without spreading

Even though growing new sculk requires experience, sculk blooms still occur for mobs that can not drop experience on death. This is the intended behavior, and a sculk catalyst even blooms when an armor stand is destroyed[3] because the game has armor stands labeled as being living entities.

When a player with no experience dies in range of a sculk catalyst, it still blooms and no sculk grows. If keep inventory is on, the player retains experience after dying. This prevents the sculk bloom from consuming the experience and growing sculk.[4]

Light source

Sculk catalysts emit a light level of 6.

Piston interactivity

Sculk catalysts cannot be moved by pistons or sticky pistons.

Sounds

Generic

Java Edition:

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

Bedrock Edition:

	sculk_catalyst 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	break .sculk_catalyst	?	1.0	0.8-1.0
	?	Blocks	When the block is placed	break .sculk_catalyst	?	1.0	0.8-1.0
	?	Blocks	While the block is in the process of being broken	hit .sculk_catalyst	?	0.3	0.5
	?	Friendly Mobs	Falling on the block with fall damage	step .sculk_catalyst	?	0.4	1.0
	?	Friendly Mobs	Walking on the block	step .sculk_catalyst	?	0.17	1.0
	?	Friendly Mobs	Jumping from the block	step .sculk_catalyst	?	0.12	1.0
	?	Friendly Mobs	Falling on the block without fall damage	step .sculk_catalyst	?	0.14	1.0

Unique

Java Edition:

Sounds								[hide]
Sound	**Closed captions**	**Source**	**Description**	**Identifier**	**Translation key**	**Volume**	**Pitch**	**Attenuation distance**
	Sculk Catalyst blooms	Blocks	When a mob is killed near a sculk catalyst	`block .sculk_catalyst .bloom`	`subtitles.block .sculk_catalyst .bloom`	0.5	0.6-1.0	12

Bedrock Edition:

Sounds							[hide]
Sound	**Closed captions** [*upcoming: BE 26.0*]	**Source**	**Description**	**Identifier**	**Translation key** [*upcoming: BE 26.0*]	**Volume**	**Pitch**
	?	Blocks	When a mob is killed near a sculk catalyst	`bloom .sculk_catalyst`	?	2.0	0.6-1.0

Data values

ID

Java Edition:

Name	Identifier	Form	Translation key	[hide]
Sculk Catalyst	`sculk_catalyst`	Block & Item	`block.minecraft.sculk_catalyst`	

Name	Identifier	[hide]
Block entity	`sculk_catalyst`	

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID[i 1]	Translation key	[hide]
Sculk Catalyst	`sculk_catalyst`	715	Block & Giveable Item[i 2]	Identical[i 3]	`tile.sculk_catalyst .name`	

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.

Name	Savegame ID [hide]
Block entity	SculkCatalyst

Block states

See also: Block states

Java Edition:

Name	Default value	Allowed values	Description [hide]
bloom	false	false true	Whether the sculk catalyst is actively spreading the sculk or not.

Bedrock Edition:

Name	Default value	Allowed values	Description [hide]
bloom	0	0 1	Whether the sculk catalyst is actively spreading the sculk or not.

Block data

A sculk catalyst has a block entity associated with it that holds additional data about the block.

Java Edition:
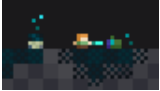
See also: Block entity format

Block entity data

Tags common to all block entities

└── **cursors**: List of sculk charge clusters associated with the sculk catalyst.

   └── : A sculk charge cluster. Each cluster is stored within a single sculk block.

      ├── **charge**: How many sculk charges are being carried in the cluster.

      ├── **pos**: List of three integers representing the coordinates of the cluster.

      ├── **decay_delay**: 1, or 0 (true/false) - *Not to be confused with update_delay*. This controls the decay of the cluster. If this is true, then the cluster was spread from a sculk block or sculk vein, and this cluster can only spread to sculk, sculk veins, and blocks with the sculk_replaceable tag set to true. If this is false, then all the sculk charges disappear when the cluster discharges to a block that is not in the sculk family.

      ├── **update_delay**: Delay in game ticks until the cluster begins to discharge (or travel) after being created. Usually starts at 1 game tick when a cluster discharges to a new block.

      └── **facings**: If the block to replace is an air or water block, the block is replaced with sculk veins, and the faces where the sculk veins are placed are stored in this list. The sculk veins never grow directly on the faces of a sculk block. The same thing is done to any air or water blocks that are adjacent to blocks that are adjacent to this sculk block, if sculk veins can't grow in the blocks adjacent to this sculk block without growing directly on the faces of sculk blocks.

Bedrock Edition:

See Bedrock Edition level format/Block entity format.

Achievements

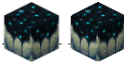| Icon		Achievement	In-game description	Actual requirements (if different)	Gamerscore earned	Trophy type (PS)
PS4	Other					
		It Spreads	Kill a mob next to a catalyst	Kill any mob that drops experience near a sculk catalyst, with the sole exception of the ender dragon. Mobs that drop no experience are ignored for this achievement.	10	Bronze

Advancements

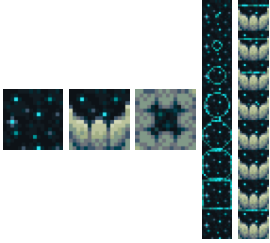| Icon	Advancement	In-game description	Actual requirements (if different) [hide]
	It Spreads	Kill a mob near a Sculk Catalyst	Kill *any* mob that drops experience near a sculk catalyst, with the sole exception of the ender dragon. Mobs that drop no experience are ignored for this advancement.

History

Announcement and tweets

October 3, 2020 (https://youtube.com/watch?v=https://youtu.be/DWZlfsaIgtE?&t=2424s)	Sculk catalysts are shown unnamed at Minecraft Live 2020.
November 13, 2020 (https://twitter.com/kingbdogz/status/1327265084352180224)	The sculk catalyst has a new texture in a tweet from Brandon Pearce.
April 26, 2021 (https://twitter.com/kingbdogz/status/1386776067046785025)	Kingbdogz states that sculk features aren't coming in 1.17.
October 16, 2021 (https://youtube.com/watch?v=https://youtu.be/w6zLprHHZOk)	Sculk features were delayed to 1.19.
	New sculk catalyst functions were shown.

Java Edition

Java Edition			[hide]
1.19	Deep Dark Experimental Snapshot 1	Added sculk catalysts.	
	22w11a	Implemented sculk catalysts into normal snapshot.	
	22w17a	Wardens now drop a single sculk catalyst upon death, making them renewable.	
1.19.1	pre6	Sculk catalysts now drop five experience instead of 20.	

Bedrock Edition

| Bedrock Edition			[hide]
1.17.30	beta 1.17.30.22	"Sculk Catalyst" was mentioned in Bedrock Beta documentation.	
	beta 1.17.30.23	Sculk Catalyst textures were shown in internal Caves & Cliffs textures.	
1.18.0 —— Experiment —— Vanilla Experiments	beta 1.18.0.22	Added sculk catalysts behind the "Vanilla Experiments" experimental toggle.	
1.18.10 —— Experiment —— Wild Update	beta 1.18.10.21	Moved sculk catalysts to the "Wild Update" experimental toggle.	
1.18.30 —— Experiment —— Wild Update	Preview 1.18.30.23	Sculk catalysts were updated to match *Java Edition*'s behavior.	
1.19.0	Preview 1.19.0.21	Sculk catalysts are now available without enabling experimental gameplay.	
	Preview 1.19.0.29	Wardens now drop a single sculk catalyst upon death.	
1.19.20	Preview 1.19.20.23	Sculk catalysts now drop five experience instead of 20.	
1.20.30	Preview 1.20.20.21	Increased the blast resistance of sculk catalysts from 1.8 to 3.	

Issues

Issues relating to "Sculk Catalyst" are maintained on the bug tracker. Issues should be reported and viewed there (https://bugs.mojang.com/issues/?jql=project%20in%20%28MC%2C%20MCPE%29%20A ND%20%28resolution%20is%20EMPTY%20OR%20resolution%20in%20%281%2C%202%2C%206%2 9%29%20AND%20%28summary%20~%20%22Sculk%20Catalyst%22%29%20ORDER%20BY%20res olution%20DESC).

Trivia

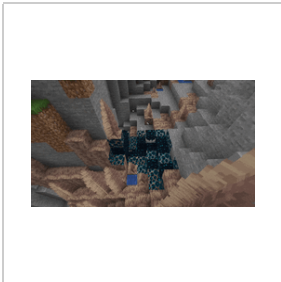- The sculk catalyst is made of a "bone-like material".[5]

Gallery

Textures
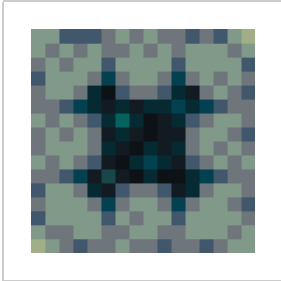
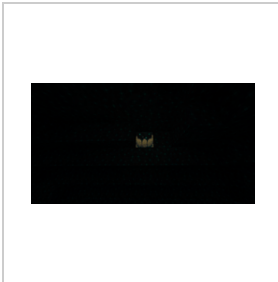
The bottom texture of the sculk catalyst.
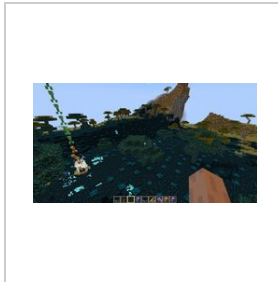
Screenshots

Slicedlime "corrupting" a canyon into sculk block by using sculk catalyst and dying skeleton in his video.

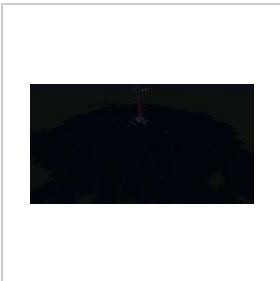Particles appear above blocks when a sculk charge travels over them.
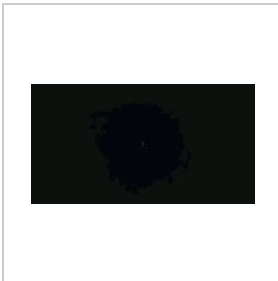

A sculk catalyst generated in a wall.

Sculk from a catalyst spreading over a savanna.
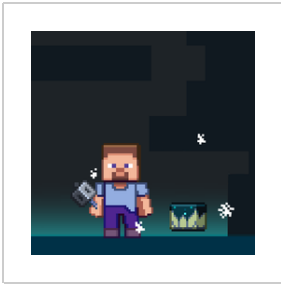

Lots of sculk from a catalyst.

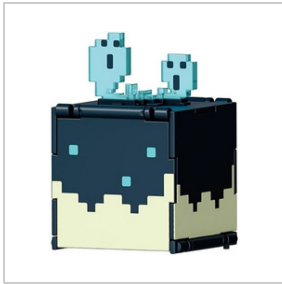

Sculk spreading from a catalyst.

Lots of sculk spreading from a catalyst.

In other media

Steve claiming a sculk catalyst from a Warden that was slain using a mace.

Sculk catalyst figure of Flippin' Figs

See also

- ▪ ⬜ Moss Block
- ▪ ⬜ Pale Moss Block

References

1. MC-249285 The ender dragon's death can trigger a sculk bloom, but it does not produce any sculk charges. The ender dragon still drops experience just like it normally does.
2. "it hasn't been implemented yet. Dragon's death is... special." (https://twitter.com/gnembon_mc/status/1495571681137594374) – @gnembon_mc (https://twitter.com/gnembon_mc) on X (formerly Twitter), February 20, 2022 However, new behavior for *ender dragon blooms* might be implemented in the future.
3. MC-251167
4. MCPE-157884
5. "That is actually a bone-like material, not End Stone :)" (https://twitter.com/kingbdogz/status/1327266276511768577) – @kingbdogz (https://twitter.com/kingbdogz) on X (formerly Twitter), November 13, 2020

Navigation

Plant	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]