Sculk Sensor

re article feedback

For the calibrated version of the sculk sensor, see Calibrated Sculk Sensor.

A **sculk sensor** is a sculk block that detects vibrations caused by nearby actions and events and emits a redstone signal in response. Player-caused vibrations can also trigger nearby sculk shriekers. Sneaking prevents the creation of vibrations while moving, and wool can be used to block or prevent them. Placing an amethyst block next to a sculk sensor allows it to "relay" detected vibrations to other sculk sensors.

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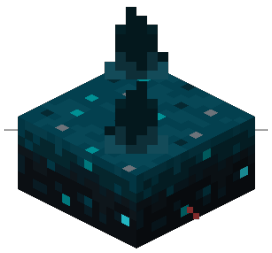
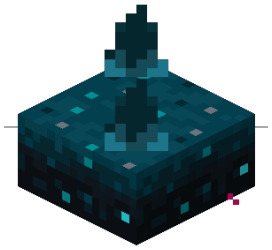
Sculk Sensor



Java Edition



Bedrock Edition

Renewable	Yes
Stackable	Yes (64)
Tool	
Blast resistance	1.5
Hardness	1.5
Luminous	Yes (1)
Transparent	Yes
Waterloggable	Yes
Flammable	No
Catches fire from lava	No
Map color (*JE*)	23 COLOR_CYAN

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Obtaining

Breaking

A sculk sensor can be mined with any tool, but hoes are the quickest. It drops itself only if mined with any tool enchanted with Silk Touch. If mined with a non-Silk Touch tool, it drops 5 experience instead.

Block	Sculk Sensor
Hardness	1.5
Tool	
Breaking time (sec)[A]	
Default	2.25
Wooden	1.15
Stone	0.6
Copper	0.45
Iron	0.4
Diamond	0.3
Netherite	0.25
Golden	0.2

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.

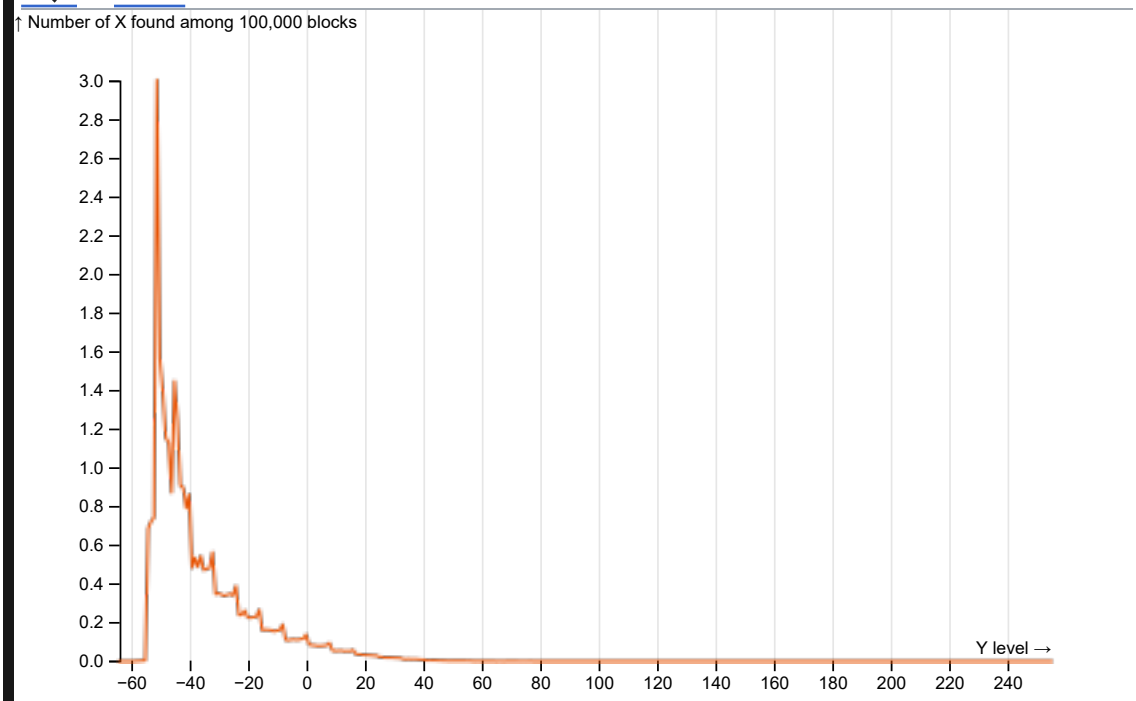
Natural generation

Sculk sensors generate within the deep dark biome and ancient cities.

Block distribution for Sculk Sensor in Java Edition 1.21.7

Sculk Sensor

Ov orld



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.

Generated loot

Item	Structure	Container	Quantity	Chance [hide]
Java Edition* and *Bedrock Edition				
Sculk Sensor	Ancient City	Chest	1–3	23.2%

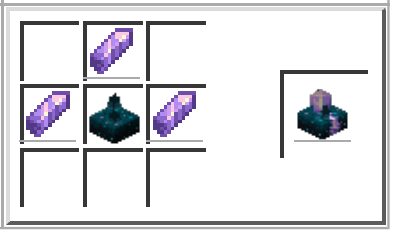
Post-generation

A sculk catalyst has a 9% chance of generating a sculk sensor on top of a sculk block.

Usage

Crafting ingredient

Sculk sensors can be used to craft calibrated sculk sensors.

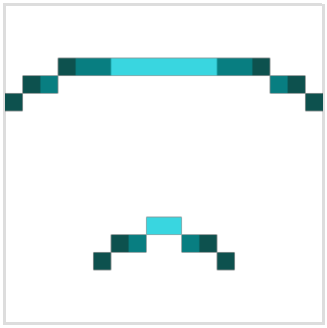
Name	Ingredients	Crafting recipe [hide]
Calibrated Sculk Sensor	Amethyst Shard + Sculk Sensor	

Light

A sculk sensor has a light level of 1. When active, it changes to a lighter block state without a change to the light level.

Vibration detection

Sculk sensors detect vibrations in an 8 block spherical radius around it. Vibrations are caused by various events, such as players and mobs walking, placing or breaking blocks (except wool or carpet), gliding with elytra, items falling on the ground, shooting projectiles, a piston extending or a wet wolf shaking itself off. Vibrations have an associated frequency; different events create vibrations of different frequencies.



The sculk sensor vibration particle.

When a vibration is made within the range of a sculk sensor, a signal travels from the vibration source to the sensor at a speed of one block per game tick (20 blocks per second). When the signal arrives, the sensor is activated for 30 game ticks (1.5 seconds). The sensor cannot detect any other vibrations while activated or while a signal is traveling to it.

Sculk sensors have a cooldown period of 10 game ticks (0.5 seconds) after being placed or after deactivating. During this cooldown period, they cannot detect vibrations. This prevents a sensor from reactivating when a contraption it is powering (such as a piston) becomes unpowered.

Sculk sensors don't detect vibrations from other sculk sources or the warden in *Java Edition*.

Sneaking

While sneaking, a player is not detected while performing most actions corresponding to vibration frequencies 1, 2, or 3, such as moving, hitting the ground without taking damage, interacting with items, and shooting projectiles (although the projectile itself creates a vibration when it hits the ground).

Wool occlusion

Wool and carpets have a special interaction with sculk sensors. If a wool block is placed between a sensor and a vibration source, the sensor is not able to detect the placed wool nor vibrations behind it. Specifically, if the ray joining the cube centers of the sensor block and the vibration source passes through any wool blocks, the vibration is occluded. If the ray passes diagonally through the edge between two blocks, either one or the other block may occlude it but not both. Sculk sensors are not able to detect footsteps or dropped items on wool or carpet, placement or breaking of wool or carpet, or wool or carpets dropping as items.

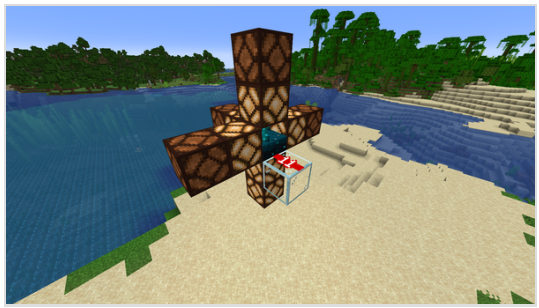
Sculk shriekers

Sculk sensors pass on the vibrations made by players to sculk shriekers within 8 blocks of the sensor. For example, an item dropped by a player triggers the shrieker, but an item dropped by a dispenser or from a

broken block does not; a player flying around with elytra triggers the shrieker, but a bat flying around does not. Alarms can be blocked by wool placed in between the sensor and shrieker, similar to how wool can block vibrations from reaching the sensor itself.

Redstone emission

Sculk sensors emit a redstone signal in every direction (including top and bottom) when they are activated. The redstone signal emitted from the bottom powers the block below the sensor strongly, whereas in all other directions it appears as though the sensor itself is the strongly powered block.



An activated Sculk Sensor. Only the block *below* the sensor is strongly powered. All other sides react as though the sensor itself were strongly powered.

The strength of the redstone signal is inversely proportional to the distance the vibration signal traveled – the closer the vibration is to the sculk sensor, the stronger the redstone signal is, so it reaches the maximum redstone signal strength when the vibration is directly on top of the sensor. The distance is measured from the block at which the vibration occurred; moving within a block never results in a different strength.

```
redstone_strength = max(1, 15 - floor(15 / detection_range * distance))
```

Vibration frequencies

This section needs expansion.
You can help by expanding it.
Instructions: Add Bedrock Edition values

Each vibration in the game falls under a certain frequency value. This value can be measured with a comparator. With the right contraption, the player could detect if a certain action has occurred or is occurring nearby.

Output	Vibration type	Game event	Description
1	Step	minecraft:step	Player or entity steps
	Swim	minecraft:swim	Player or entity swims, or boat paddles
	Flap	minecraft:flap	Entity flaps (bat)
	Resonate 1	minecraft:resonate_1	
2	Projectile Land	minecraft:projectile_land	Snowball lands (i.e. hits a block)
	Hit Ground	minecraft:hit_ground	Player or entity hits ground after a jump or fall
	Splash	minecraft:splash	Player or entity splashes in water. Or entity enters water or bubble column
	Resonate 2	minecraft:resonate_2	
3	Item Interact Finish	minecraft:item_interact_finish	Any interaction using a shield, spyglass, or bone meal
	Projectile Shoot	minecraft:projectile_shoot	Projectile get shot (can be an arrow, a firework, etc.)
	Instrument Play	minecraft:instrument_play	Goat horn plays
	Resonate 3	minecraft:resonate_3	
4	Entity Action	minecraft:entity_action	Ravager roars, wolf shakes water off, villager holds an item (see Villager § Trade offering) , sniffer digs, armadillo rolls up or unrolls, or creaking stops or starts moving
	Elytra Glide	minecraft:elytra_glide	Player glides
	Unequip	minecraft:unequip	Armor gets unequipped from an armor slot or an armor stand
	Resonate 4	minecraft:resonate_4	
5	Entity Dismount	minecraft:entity_dismount	Player dismounts from a mount or vehicle
	Equip	minecraft:equip	Armor gets equipped to an armor slot or an armor stand
	Resonate 5	minecraft:resonate_5	
6	Entity Mount	minecraft:entity_mount	Player mounts a horse
	Entity Interact	minecraft:entity_interact	Player breeds an entity
	Shear	minecraft:shear	A sheep, mooshroom, or bogged gets sheared
	Resonate 6	minecraft:resonate_6	
7	Entity Damage	minecraft:entity_damage	Entity takes damage
	Resonate 7	minecraft:resonate_7	
8	Drink	minecraft:drink	Entity drinks (i.e. uses a bottled liquid or milk bucket)
	Eat	minecraft:eat	Entity eats, including players eating items, sheep attempting to eat grass, and pandas finishing eating bamboo. Not triggered by horses grazing, players feeding other animals, or frogs eating slimes and magma cubes
	Resonate 8	minecraft:resonate_8	
9	Container Close	minecraft:container_close	A chest, barrel, or shulker box closes

Output	Vibration type	Game event	Description
	Block Close	`minecraft:block_close`	A door, trapdoor, or fence gate closes
	Block Deactivate	`minecraft:block_deactivate`	A piston retracts; a lever is switched off; a button or pressure plate turn off.
	Block Detach	`minecraft:block_detach`	Tripwire gets detached from a tripwire hook
	Resonate 9	`minecraft:resonate_9`	
10	Container Open	`minecraft:container_open`	A chest (or any of its variants) or shulker box opens.
	Block Open	`minecraft:block_open`	A door, trapdoor, or fence gate closes
	Block Activate	`minecraft:block_activate`	A dispenser, piston, button, lever, or pressure plate is powered. Not triggered by a crafter, dropper, or jukebox
	Block Attach	`minecraft:block_attach`	Tripwire gets attached to a tripwire hook
	Prime Fuse	`minecraft:prime_fuse`	The fuse of a TNT block or creeper is ignited
	Note Block Play	`minecraft:note_block_play`	Note block plays a note
	Resonate 10	`minecraft:resonate_10`	
11	Block Change	`minecraft:block_change`	Block changes state (chiseled bookshelf, lectern, composter, decorated pot, bell ringing, item frame etc.) [*more information needed*]
	Resonate 11	`minecraft:resonate_11`	
12	Block Destroy	`minecraft:block_destroy`	A block is destroyed, either through breaking, removing a block required to support it, or pushing it with a piston (if the block is broken when moved). Not triggered when blocks are destroyed by an explosion.
	Fluid Pickup	`minecraft:fluid_pickup`	A liquid is picked up into a glass bottle or empty bucket (i.e. the bottle or bucket is used, filling it with water, lava, milk, honey, powder snow, or a potion from a cauldron[*Bedrock Edition only*])
	Resonate 12	`minecraft:resonate_12`	
13	Block Place	`minecraft:block_place`	Block is placed
	Fluid Place	`minecraft:fluid_place`	Fluid is placed (from a bucket)
	Resonate 13	`minecraft:resonate_13`	
14	Entity Place	`minecraft:entity_place`	Entity is placed (i.e. a vehicle, armor stand, or item frame is placed; or a mob is spawned via spawn egg, mob spawner, creaking heart, or evoker magic). Not triggered by random mob spawning or breeding
	Lightning Strike	`minecraft:lightning_strike`	Lightning strikes
	Teleport	`minecraft:teleport`	Endermen, shulker, or player eating a chorus fruit teleports. Not triggered by wolves, cats, or ender pearls.
	Resonate 14	`minecraft:resonate_14`	
15	Entity Die	`minecraft:entity_die`	Entity dies (including a vehicle, armor stand, or item frame being broken), or firework finishes
	Explode	`minecraft:explode`	TNT, end crystal, bed, respawn anchor, creeper, ghast fireball, or wither skull explodes
	Resonate 15	`minecraft:resonate_15`	

Vibration resonance

When a sculk sensor detects a vibration, any adjacent block of amethyst re-emits a vibration of the same frequency that the sculk sensor detected, which can be detected by other sensors.

Things which are not detected

The following occurrences, despite presumably causing physical motion, do not produce vibrations and therefore cannot be detected:

- Blocks destroyed by a fluid flowing into their space[1]
- Several blocks being destroyed due to their supporting block being removed:[2]
  - Rails
  - Powered rails
  - Detector rails
  - Activator rails
  - Redstone wire
  - Redstone repeaters
  - Redstone comparators
- Several cases where a dispenser fails to perform an action:[3]
  - Flint and steel not creating fire
  - Bone meal not growing something
  - Heads and carved pumpkins, if not equipped on something or placed
  - Shulker boxes, if not placed
  - Shears, if there's nothing to shear
  - Glowstone, if it doesn't charge a respawn anchor
- Inserting an eye of ender into an end portal frame[4][5]
- Eyes of ender breaking[6]
- Silverfish entering blocks[7]
- Water and lava flowing into existing spaces, or drying up[8]
- Changing the mode of a redstone comparator[9]
- Changing the delay on a redstone repeater[10]
- Changing the shape of a single unit of redstone wire[11]
- Fire extinguished by rain[12]

The following cases have been confirmed to be intentional:

- Axolotls being bred via tropical fish buckets[13]
- Moss blocks replacing existing blocks[14]

Piston interactivity

Sculk sensors are immovable. Pistons cannot push them, and sticky pistons cannot push or pull them. Slime blocks and honey blocks do not stick to sculk sensors and have no effect whether the slime block or honey block is being pushed or pulled.

Sounds

A sculk sensor is silent if waterlogged. It can still detect vibration, but does not produce sounds itself.

Generic

Java Edition:

sculk_sensor 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_sensor.break	subtitles.block.generic.break	0.9	0.96	16
	Block placed	Blocks	When the block is placed	block.sculk_sensor.place	subtitles.block.generic.place	0.8	0.96	16
	Block breaking	Blocks	While the block is in the process of being broken	block.sculk_sensor.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.sculk_sensor.fall	subtitles.block.generic.fall	0.5	0.75	16
	Footsteps	*Entity-Dependent*	Walking on the block	block.sculk_sensor.step	subtitles.block.generic.footsteps	0.15	1.0	16

Bedrock Edition:

sculk_sensor 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_sensor	?	0.8	0.8-1.0
	?	Blocks	When the block is placed	place.sculk_sensor	?	0.8	0.8-1.0
	?	Blocks	While the block is in the process of being broken	hit.sculk_sensor	?	0.35	0.5
	?	Players	Falling on the block with fall damage or the player flying with elytra	fall.sculk_sensor	?	0.4	1.0
	?	Players	Walking on the block	step.sculk_sensor	?	0.17	1.0
	?	Players	Jumping from the block	jump.sculk_sensor	?	0.12	1.0
	?	Players	Falling on the block without fall damage	land.sculk_sensor	?	0.14	1.0

Unique

Java Edition:

Sounds [hide]								
Sound	Closed captions	Source	Description	Identifier	Translation key	Volume	Pitch	Attenuation distance
	Sculk Sensor clicks	Blocks	When a sculk sensor detects a vibration	`block.sculk_sensor.clicking`	`subtitles.block.sculk_sensor.clicking`	0.73	0.8-1.0	16
	Sculk Sensor stops clicking	Blocks	When a sculk sensor deactivates	`block.sculk_sensor.clicking_stop`	`subtitles.block.sculk_sensor.clicking_stop`	0.62	0.8-1.0	16
	Amethyst resonates	Blocks	When an amethyst block re-emits a vibration	`block.amethyst_block.resonate`	`subtitles.block.amethyst_block.resonate`	1.0	*varies*[sound 1]	48

1. Picks number from 0, 0, 2, 4, 6, 7, 9, 10, 12, 14, 15, 18, 19, 21, 22, or 24 using the vibration's signal strength, and applies $2^{\frac{n-12}{12}}$. It uses the same equation that note blocks do.

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 sculk sensor detects a vibration	`power.on.sculk_sensor`	?	0.73	0.8-1.2
	?	Blocks	When a sculk sensor deactivates	`power.off.sculk_sensor`	?	0.62	0.8-1.2
	?	Blocks	When an amethyst block re-emits a vibration	`resonate.amethyst_block`	?	3.0	*varies*[sound 1]
None	*None* [sound 2]	*None*	*Undefined sound event*	`block.sculk_sensor.clicking`	*None*[sound 2]	1.0	0.73
	?	*None*	*Undefined sound event*	`block.sculk_sensor.clicking_stop`	?	1.0	0.62

1. Uses the same system as Java Edition.[*verify*]
2. Empty events do not have this parameter set.

Data values

ID

Java Edition:

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

Name	Identifier [hide]
Block entity	`sculk_sensor`

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID[i 1]	Translation key [hide]
Sculk Sensor	`sculk_sensor`	`562`	Block & Giveable Item[i 2]	Identical[i 3]	`tile.sculk_sensor.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	`SculkSensor`

Block states

See also: Block states

Java Edition:

Name	Default value	Allowed values	Description [hide]

power	`0`	`0`
		`1`
		`2`
		`3`
		`4`
		`5`
		`6`
		`7`
		`8`
		`9`
		`10`
		`11`
		`12`
		`13`
		`14`
		`15`
			The sculk sensor's current power level.

sculk_sensor_phase	`inactive`	`active`
		`cooldown`
		`inactive`
			Whether or not the sculk sensor is active.[*more information needed*]

waterlogged	`false`	`false` `true`	Whether or not there's water in the same place as this sculk sensor.

Bedrock Edition:

Name	Metadata Bits	Default value	Allowed values	Values for Metadata Bits	Description [hide]

sculk_sensor_phase	Not Supported	`0`	`0`
			`1`
			`2`
				`Unsupported`	The sculk sensor phase.
					[*more information needed*]

Block data

A sculk sensor 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

- **last_vibration_frequency**: The frequency of the last vibration.
- **listener**: The vibration event listener for this sculk shrieker, sculk sensor, or calibrated sculk sensor.
  - **event**: Exists only if there is an incoming vibration.
    - **distance**: The distance between this vibration's source and the block.
    - **game_event**: The resource location of the vibration event that caused the current incoming vibration.
    - **pos**: The coordinates of the source of this vibration.
      - : X coordinate.
      - : Y coordinate.
      - : Z coordinate.
    - **projectile_owner**: If the vibration was caused by a projectile, this is the UUID of the entity that launched the projectile. Does not exist if vibration was not caused by a projectile.
    - **source**: The UUID of the entity that caused the vibration. Does not exist if vibration was not caused by an entity.
  - **event_delay**: How many ticks remain until triggered by the vibration. Set to 0 if there is no incoming vibration
  - **selector**: The data of the vibration selector.[*more information needed*]
    - **tick**: The game time when the vibration occurs, or -1 if there is no vibration to choose from. [*more information needed*]
    - **event**: Candidate game event, with the same structure as the **event** tag above. [*more information needed*]

Bedrock Edition:

See Bedrock Edition level format/Block entity format.

Achievements

[hide]

Icon		Achievement	In-game description	Actual requirements (if different)	Gamerscore earned	Trophy type (PS)
PS4	Other					
		Sneak 100	Sneak next to a Sculk Sensor without triggering it	Sneak next to a Sculk Sensor or Warden without triggering or aggravating it.	10	Bronze

Advancements

Icon	Advancement	In-game description	Actual requirements (if different) [hide]
	Sneak 100	Sneak near a Sculk Sensor or Warden to prevent it from detecting you	Sneak within 8 blocks from a sculk sensor, or 16 blocks from a warden.

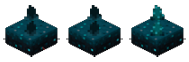
Videos

History

Development

2020 (https://twitter.com/CagilMartin1/status/1540933520268607490)	Prototypes for the sculk sensor are made, previously simply stepping on sculk would produce noise and alert the warden.
	The sculk sensors were originally going to emit a redstone signal only after being triggered four times, visually shown by markings on its top that would light up each time.
October 3, 2020 (https://youtube.com/watch?v=DBvZ2lqmm3M&t=13m02s)	File:Sculk Sensor (pre-release 1).gifThe sculk sensor is shown off at Minecraft Live 2020.
	Item model was without tendrils since they were an entity, similar to the book on the enchanting table.
November 13, 2020 (https://twitter.com/kingbdogz/status/1327265084352180224)	The sculk sensor has a new texture and clicking animation in a tweet from Brandon Pearce.
	Tendrils are no longer entities and merged to block model.
November 23, 2020 (https://twitter.com/kingbdogz/status/1330993128099229697)	The sculk sensor has a new clicking animation in a tweet from Brandon Pearce.
November 27, 2020 (https://twitter.com/kingbdogz/status/1332335160038191105)	The sculk sensor has a new final texture in a tweet from Brandon Pearce.

Java Edition

Java Edition [hide]		
1.17	20w49a	 Added sculk sensor with a new inactive and clicking animation.
	20w51a	Eating Start has been removed as an event.
		Entity Hit's frequency value has changed from 9 to 8.
		Container Close's frequency value has changed from 10 to 14.
		Container Open's frequency value has changed from 11 to 15.
		Walking on wool no longer causes vibrations.
		Throwing wool as an item onto the ground no longer causes vibrations.
		Sculk sensors are now silent while waterlogged.
	21w05a	Added the following game events: **Output** | **Vibration type** [show]
	21w13a	The two unused textures of the calibrated sculk sensor top and side have been removed.
	21w19a	Sculk sensors are now accessible only through commands.
1.18	Experimental Snapshot 1	Sculk sensors are now available in the Creative inventory.
	21w37a	Sculk sensors are once again accessible only through commands.
1.19	Deep Dark Experimental Snapshot 1	Sculk sensors now generate in the deep dark biome.
		Sculk sensors now drop experience when mined without Silk Touch.
		Sculk sensors now always activate when stepped on, even when sneaking.
		Sculk sensors have been re-added to the Creative inventory.
	22w15a	Carpets, like wool blocks, now dampen the vibrations caused by their placing, breaking or dropping as items.
		Carpets now also dampen the vibrations caused by running and jumping over them.
1.19.4	23w06a	Sculk sensors are now able to detect more actions included in several existing and new game events, such as: ▪ `block_change`: ▪ Using shears on cave vines, kelp, twisting vines, and weeping vines. ▪ Picking an item from a cave vine or a lectern. ▪ Interacting with items placed on both types of item frames. ▪ Trampling farmland into regular dirt. ▪ Charging up a respawn anchor. ▪ Interacting with a composter. ▪ `block_place`: ▪ Turtle and frogs laying eggs. ▪ `container_close`: ▪ Closing a minecart with chest or a boat with chest. ▪ `entity_dismount` (new game event, with signal 6): ▪ Dismount any passenger from any vehicle. ▪ `entity_interact`: ▪ Dyeing a sheep. ▪ Attaching or removing a lead from an entity. ▪ `entity_mount` (new game event, with signal 7):

		▪ Mount any passenger to any vehicle.
	pre1	The `item_interact_finish` event now has a vibration frequency of 2 instead of 14.
	pre4	Sculk sensors are now activated upon breaking shulker bullets.
1.20	**23w12a**	Sculk sensors can now be used to craft calibrated sculk sensors.
		Vibration frequencies of many actions in the game have been tweaked and greatly simplified to prevent unwanted interference, as following: **Old output** / **Vibration type** / **Game event** / **Description** [show] **Action** / **New frequency value** [show] 1. Is ignored when sneaking. 2. Also works with dispensers. 3. Despite being an occurrence of splashing, sculk sensors do *not* detect fishing bobbers hooking a fish; this has been confirmed by Mojang to be intentional.[16] 4. Milk does not trigger any vibration, and honey and stews trigger the eating event. See MC-213937. 5. Honey bottles and stews count as food for this case. 6. This includes blocks placed by a dispenser or enderman. 7. Using fish buckets to breed axolotls does not cause this vibration. This inconsistency is intentional.[13] 8. Replacing an existing fluid, in and out of a cauldron, does not trigger the event. See MC-213965. 9. This does not include blocks broken by flowing water (MC-207410), nor redstone dust, redstone repeaters, redstone comparators or any type of rail being broken due to its supporting block being removed (MC-207411), nor the last slice of cake being eaten (MC-213968). 10. Closing a minecart with a chest or with a hopper does not trigger this event. See MC-210707.
		Sculk sensors now resonate their vibrations through amethyst.
	23w14a	The default redstone output for sculk sensors has been modified to be more reliable for distance calculations.
		Sculk sensors now strongly power the block they are placed on.
		Removed the `cooldown` state of `sculk_sensor_phase` block state.
	23w16a	If a vibration is scheduled to be received by a sculk sensor, it stays queued until all adjacent chunks are loaded and ticking. This prevents vibration resonance setups from breaking when unloading their chunks from a distance.
	23w17a	Sculk sensors now last 30 game ticks when in Active phase instead of 40.
		Sculk sensors now last 10 game ticks when in Cooldown phase instead of 1.
	23w18a	Landing or jumping on the edge of wool no longer triggers sculk sensors.[20]
		Walking on the edge of blocks now properly triggers sculk sensors.[21]
1.20.2	**23w31a**	Witches drinking potions emit an `entity_action` vibration of frequency 4.
		Turtles clearing away sand emit an `entity_action` vibration of frequency 4.
		Camels dashing, standing up, or sitting down emit an `entity_action` vibration of frequency 4.
		Totems of undying activating emit an `entity_damage` vibration of frequency 7.
	23w32a	Vibrations no longer risk being lost on simulation distance limit.
		Unequipping items emits a new `unequip` vibration of frequency 4.
		Chiseled bookshelves emit a `block_change` vibration of frequency 11 when receiving books from hoppers.
		Turtle eggs cracking emit a `block_change` vibration of frequency 11.

		Turtle eggs hatching emit a `block_destroy` vibration of frequency 12.
		Using bone meal emits an `item_interact_finish` vibration of frequency 3.
		Fire being doused by splash water bottles emits a `block_destroy` vibration of frequency 12.
		Evokers evoking vexes or fangs emit an `entity_place` vibration of frequency 14.
		Carrots being eaten by rabbits emit a `block_change` vibration of frequency 11.
		Sweet berries being eaten by foxes emit a `block_change` vibration of frequency 11.
		Camels eating cactus emit an `eat` vibration of frequency 8.
1.21	**24w19a**	Frosted ice being placed by Frost Walker emits a `block_place` vibration of frequency 13.
1.21.4	**24w45a**	Resin clump being placed by creaking heart emits a `block_place` vibration of frequency 13.
1.21.5	**25w02a**	Attacking a creaking spawned by a creaking heart emits an `entity_action` vibration of frequency 4.

Bedrock Edition

Bedrock Edition [hide]		
1.16.210 Experiment **Caves and Cliffs**	**beta 1.16.210.56**	Added the sculk sensor. It uses a different texture from the one in *Java Edition*.
		`sculk_sensor_redstone_signal` particles are also different from the ones in *Java Edition*.
1.17.0 Experiment **Caves and Cliffs**	**beta 1.17.0.50**	Sculk sensors can now detect walking vibrations below y=0.
1.17.10 Experiment **Caves and Cliffs**	**beta 1.17.10.20**	Texture changed to match *Java Edition*. But not the animation.
1.18.0	**beta 1.18.0.20**	Sculk sensors are now available outside experimental gameplay.
1.18.0 Experiment **Vanilla Experiments**	**beta 1.18.0.22**	Sculk sensors have been moved behind the "Vanilla Experiments" Experimental Gameplay toggle.
		Sculk sensors are now broken faster with a hoe.
1.18.10 Experiment **Wild Update**	**beta 1.18.10.21**	Sculk sensors have been moved behind the "Wild Update" Experimental Gameplay toggle.
1.18.30 Experiment **Wild Update**	**Preview 1.18.30.23**	Added wool occlusion to sculk sensors.
		Sculk sensors no longer make clicking sounds if they are waterlogged.
	Preview 1.18.30.29	Sculk sensors now generate in the deep dark biome.
1.19.0	**Preview 1.19.0.21**	Added more game events to match *Java Edition*.
		Sculk sensors now always activate when stepped on, even when sneaking.
		Sculk sensors are now available without enabling experimental gameplay again.
	Preview 1.19.0.25	Sculk sensors now drop experience when mined without Silk Touch.

1.20.10	**Preview 1.20.10.20**	Sculk sensors can now detect the following events: ▪ Placing, rotating, or removing an item in an item frame or a glow item frame. ▪ Charging a respawn anchor. ▪ Scraping or applying wax to blocks of the copper block set. ▪ Switching a daylight detector to an inverted daylight detector or vice-versa. ▪ Adding food to a campfire. ▪ Adding or removing a music disc to a jukebox. ▪ Mud turning into clay. ▪ Harvesting sweet berries. ▪ Placing an eye of ender in an end portal frame. ▪ Bees entering or exiting a beehive or a bee nest. ▪ Interacting with composter. ▪ Attaching or detaching a lead from a fence. ▪ Attaching or detaching a lead from a mob. ▪ Dying a sheep. ▪ Picking glow berries. ▪ Farmland turning into dirt. ▪ Using a spawn egg on a monster spawner. ▪ Silverfish merging with blocks. ▪ Using a hoe on rooted dirt. ▪ Using a shovel to create dirt paths. ▪ Placing a door. ▪ Planting seeds in farmland.
1.20.30	**Preview 1.20.30.20**	Sculk sensors can now detect the following events: ▪ Throwing an eye of ender. ▪ Minecarts, consistently when moving on rails while empty. ▪ Collecting fish, axolotls, and tadpoles with buckets. ▪ Cleaning items in cauldrons. ▪ Dying leather armor in cauldrons. ▪ Tipping arrows in cauldrons. ▪ Using dyes to change cauldrons' water color. ▪ Non-player actors event when equipping shields in their off-hand slot.
	Preview 1.20.30.21	Sculk sensors can now detect the following events: ▪ Applying a name tag. ▪ Evokers summoning vexes or fangs. ▪ Chickens, frogs, and turtles laying eggs. ▪ Using bone meal. ▪ Chiseled bookshelves when books are inserted into them using hoppers. ▪ Extinguishing fire. ▪ Mounting or dismounting a vehicle. ▪ Rabbits eating carrot crops. ▪ Foxes eating sweet berry bushes. ▪ Unequipping armor. ▪ Placing a banner, bamboo sapling, lily pad, or a head. ▪ Placing frogspawns. ▪ Placing or adding sea pickles. ▪ Adding/destroying a turtle egg. ▪ Turtle eggs cracking.
1.21.60	**Preview 1.21.60.21**	Resin clump being placed by creaking heart emits a `block_place` vibration of frequency `13`.

Issues

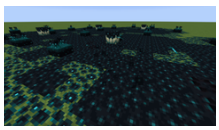
Issues relating to "Sculk Sensor" are maintained on the bug tracker. Issues should be reported and viewed there (https://bugs.mojang.com/issues/?jql=project%20in%20%28MC%2C%20MCPE%29%20AND%20%28resolution%20is%20EMPTY%20OR%20resolution%20in%20%281%2C%202%2C%206%29%29%20AND%20%28summary%20~%20%22Sculk%20Sensor%22%29%20ORDER%20BY%20resolution%20DESC).

Trivia

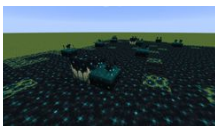
- "Sculk" is derived from "skulk", meaning "keep out of sight, typically with a sinister or cowardly motive".[22]
- In one of the early "hollowed" concepts of the sculk sensor, it used to require 4 vibrations before it would emit a redstone signal, indicated by the markings on the top texture, which would light up for each vibration received and would slowly go down over time.[23]

Gallery

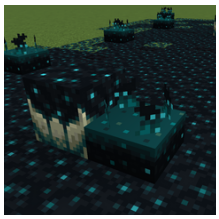
Development images



Multiple Sculk sensors with other sculk type of blocks on Minecraft Live.

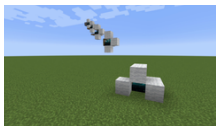


Ditto. Screenshot by kingbdogz.



Close look.

Wool occlusion.



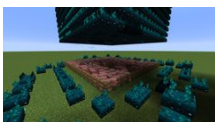
Sculk sensors as wireless redstone.

Sculk sensors are not affected by rain.

Sculk in a forest.

Old textures.

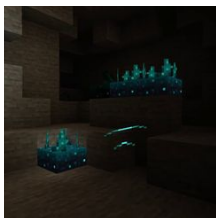
New textures.



Performance optimizing.

Ditto.

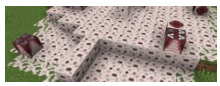
Snowballs creating vibrations.



Sculk sensors in a cave.

A contraption using a waterlogged sculk sensor.

Sculk type of blocks in redstone category.



Trypophobia sculk sensor.

Trypophobia sculk sensor recreation.

Ditto.

Ditto.

Ditto.

Ditto.

References

1. MC-207410
2. MC-207411
3. MC-208142
4. MC-208805
5. MC-209798
6. MC-210153
7. MC-210283
8. MC-210482
9. MC-211331
10. MC-214621
11. MC-214623
12. MC-251525
13. MC-208799 — resolved as "Works As Intended".
14. MC-214210 — resolved as "Works As Intended".
15. MC-213936
16. MC-207334 — resolved as "Works As Intended".

17. MC-213950
18. MC-213962 — resolved as "Works As Intended".
19. MC-213947
20. MC-252389 — When landing (or jumping) on wool with your hitbox over the edge, it produces a vibration — resolved as "Fixed".
21. MC-207290 — Sculk sensors don't detect vibrations while walking on the edge of a block — resolved as "Fixed".
22. "While not related, Sculk name was inspired by Jeb's process with naming the Shulkers - he liked the word "Lurker", but changed it around a bit to feel new. Sculk is one letter changed in Skulk, meaning 'keep out of sight, typically with a sinister or cowardly motive'" (https://twitter.com/kingbdogz/status/1316040636538204160) – @kingbdogz (https://twitter.com/kingbdogz) on X (formerly Twitter), October 13, 2020
23. "This is how the old sculk sensor worked Source: Minecraft Ideas Academy discord" (https://twitter.com/CagilMartin/status/1540933520268607490) – @CagilMartin (https://twitter.com/CagilMartin) on X (formerly Twitter), June 26, 2022

External links

- How to Use Sculk Sensors (https://www.minecraft.net/en-us/article/how-use-skulk-sensors) – Minecraft.net on February 2, 2023

Navigation

Redstone [hide]

Redstone circuits & tutorials [show]

Redstone components [hide]

Power emission	Block of Redstone · Buttons (Wooden · Stone · Polished Blackstone) · Daylight Detector · Detector Rail · Jukebox · Lectern · Lever · Lightning Rod · Observer · Pressure Plates (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

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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 Redstone Ore (Deepslate)
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)

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