Crafter ᵛ ᵗᵉ re article feedback

For the block for manual crafting, see Crafting Table. For other blocks that can be used to combine items, see Workstation.

A crafter is a low-capacity storage block that can use its contents to craft items when given a redstone signal, ejecting the results into the world or into a container it is facing. Its inventory slots can be individually locked so hoppers and similar blocks cannot fill them, while not affecting crafting recipes.

Crafter	
Normal Powered Crafting	

Renewable	Yes
Stackable	Yes (64)
Tool	
Blast resistance	3.5
Hardness	1.5
Luminous	No
Transparent	No
Flammable	No
Catches fire from lava	No
Map color (*JE*)	⬜ 11 STONE

Contents

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Navigation

Obtaining

Breaking

Crafters can be mined with anything, but pickaxes are the quickest.

Block	🗄 Crafter
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.

Crafting

Ingredients	Crafting recipe	[hide]
Iron Ingot + Crafting Table + Redstone Dust + Dropper		

Usage

In *Java Edition*, crafters cannot be moved by pistons.

Container
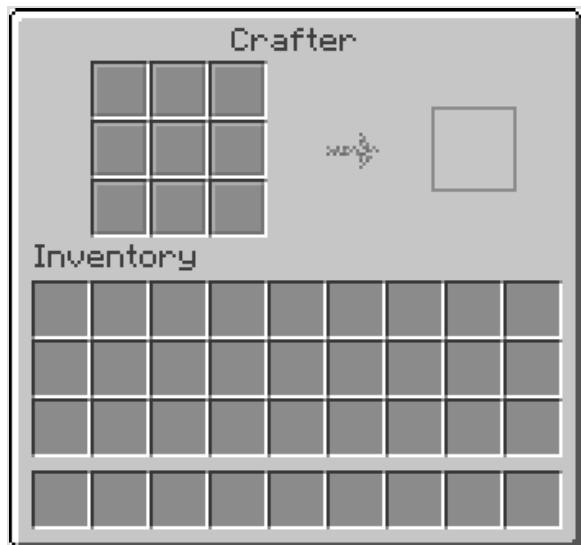
A crafter has nine slots of inventory space, arranged in a 3-by-3 grid like a crafting table. Its GUI can be accessed by using it.

A slot can be enabled or disabled, which can be toggled by clicking on it when empty. Disabled slots cannot have items put in them.

Hoppers, droppers and other crafters interact with crafters by inserting items into its inventory. Hoppers can remove ingredients as well. When an item is added:

The crafter's GUI in *Java Edition*.

- The crafter will look for an empty slot to insert that item into. It searches in standard reading order.
- So it searches the slots in this order: top left, top center, top right, middle left, middle center, middle right, bottom left, bottom center, bottom right.
- Only enabled slots are checked.
- If the crafter has all enabled item slots filled, then the item is added to the lowest count item stack of the same type. If there is a tie, it uses the same reading order described before.[1]

Hoppers and droppers can interact with all sides of the crafter, and added items follow the rules described above.

A simple contraption for crafting cake using the crafter

Redstone component

> See also: Tutorial:Crafter

When a crafter receives a redstone signal, it waits for 4 game ticks (0.2 seconds) before ejecting one crafted item using the ingredients from the nine inventory slots. The crafted items are subsequently ejected from the front of the crafter. If the front of a crafter is facing a container (including another crafter), the crafted items are transferred into the container. If the container it is facing is full, or the item cannot be inserted into the container, the crafter ejects the item instead. Crafters interact with containers similar to droppers. If a recipe has byproducts (e.g. empty bottles for honey blocks or empty buckets for cake) those are ejected after the crafted item.

For shaped recipes, the position of the items in the inventory matters. Because disabled slots prevent items from entering the slot, crafters can be used to craft any item in the game automatically without any input from the player, using a series of hoppers and/or droppers and the correct configuration of disabled slots for the recipe.

A hopper placed below a crafter collects the ingredients from the crafting grid, not the resulting item.

In *Java Edition*, unlike dispensers and droppers, crafters aren't affected by quasi-connectivity.[2]

Comparators can emit a redstone signal when reading from a crafter. The signal strength is equal to the number of crafting slots that are either disabled or occupied by an item. [3] The stack size of the item has no effect on the comparators output signal e.g. having 1 stick in a slot vs having 64 sticks in that same slot both output the same comparator signal. An empty crafter with no disabled slots does not output any signal through a comparator. A crafter with every slot being disabled or containing an item (of any stack size) outputs a signal strength of nine through a comparator.

Sounds

Generic

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

Unique

ℹ️ **This section is missing information about: sound when clicking on slots for enabling and disabling**
Please expand the section to include this information. Further details may exist on the talk page.

Java Edition

Sounds								[hide]
Sound	Closed captions	Source	Description	Identifier	Translation key	Volume	Pitch	Attenuation distance
	Crafter crafts	Blocks	When a crafter crafts something	`block .crafter .craft`	`subtitles .block .crafter .craft`	1.0	1.0/0.96/1.04	5
	Crafter fails crafting	Blocks	When a crafter fails to craft	`block .crafter .fail`	`subtitles .block .crafter .fail`	1.0	1.0/0.96/1.04	3
	Chest locked[sound 1]	Blocks	When a player attempts to open a crafter locked using the **lock** tag	`block .chest .locked` [sound 1]	`subtitles .block .chest .locked` [sound 1]	1.0	1.0	16

1. MC-98316 — Wrong subtitles caused by missing distinction

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 crafter crafts something	`crafter.craft`	?	1.0	0.96-1.04
	?	Blocks	When a crafter fails to craft	`crafter.fail`	?	1.0	0.96-1.04
	?	Sound	When a slot is enabled in a crafter	`random.click`	?	0.4	1.0
	?	Blocks	When a slot is disabled in a crafter	`crafter .disable_slot`	?	0.4	0.75

Data values

ID

Java Edition:

Name	Identifier	Form	Block tags	Translation key	[hide]
Crafter	`crafter`	Block & Item	`mineable/pickaxe` `needs_stone_tool`	`block.minecraft.crafter`	

Name	Identifier	[hide]
🏭 Block entity	crafter	

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID[i 1]	Translation key	[hide]
🏭 Crafter	crafter	-313	Block & Giveable Item[i 2]	Identical[i 3]	tile.crafter.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	Crafter	

Block states

See also: Block states

Java Edition:

Name	Default value	Allowed values	Description	[hide]
crafting	false	false true	Whether the crafter's mouth is open and top is glowing.	
orientation	north_up	down_east down_north down_south down_west east_up north_up south_up up_east up_north up_south up_west west_up	The direction the crafter's *face* is facing and which way it is rotated.	
triggered	false	false true	Whether the crafter is activated.	

Bedrock Edition:

Name	Metadata Bits	Default value	Allowed values	Values for Metadata Bits	Description [hide]
crafting	Not Supported	`false`	`false` `true`	Unsupported	Whether the crafter's mouth is open and top is glowing.
orientation	Not Supported	`down_east`	`down_east` `down_north` `down_south` `down_west` `east_up` `north_up` `south_up` `up_east` `up_north` `up_south` `up_west` `west_up`	Unsupported	The direction the crafter's *face* is facing and which way it is rotated.
triggered_bit	Not Supported	`false`	`false` `true`	Unsupported	Whether the crafter is activated.

Block data

A crafter 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

— **crafting_ticks_remaining**: Set to 6 when the crafter crafts something.[*more information needed*]

— **triggered**: Set to 1 when it is powered. It is otherwise 0.

— **disabled_slots**: Indexes of slots that are disabled.

— **Items**: List of items in this container.

└ : An item in the crafter, including the slot tag. Crafter slots are numbered 0-8. 0 starts in the top left corner.

An item

— **lock**: Optional. An item predicate representing the "key" to open this container.

item predicate

— **LootTable**: Optional. Name of the loot table to use. If this is used in a chest-like container, the loot table generates its content when it is opened. Generating the items in the container removes both loot table tags (**LootTable** and **LootTableSeed**). Is not preserved when removed.

└ **LootTableSeed**: Optional. Seed for generating the loot table. The default value works similarly to the seeds for worlds, where value of 0 or an omitted value causes the game to use a random seed.

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					[hide]
		Crafters Crafting Crafters	Be near a Crafter when it crafts a Crafter	—	10	Bronze

Advancements

Icon	Advancement	In-game description	Actual requirements (if different) [hide]
	Crafters Crafting Crafters	Be near a Crafter when it crafts a Crafter	—

Videos

History

Announcement

October 15, 2023 (https://www.youtube.com/watch?v=DnY5xz1 1lR0&ab_channel=Minecraft)	Crafters were announced at Minecraft Live 2023.

Java Edition

Java Edition			[hide]
1.20.3 — Experiment — **Update 1.21**	**23w42a**	Added crafters behind the "Update 1.21" experimental data pack.	
		Crafters currently activate after one game tick.	
	23w43a	The textures of the crafter have been changed.	
		Slots can no longer be toggled by hotkeys; instead, hotkeys place items into the crafter normally.	
	23w46a	The textures of the crafter have been changed again.	
		Crafters now activate after 2 redstone ticks (4 game ticks), like dispensers.	
1.20.5 — Experiment — **Update 1.21**	**24w03a**	The top face of the crafter is no longer mirrored.[4]	
1.21	**24w18a**	Crafters are now available without using the "Update 1.21" experimental data pack.	

Bedrock Edition

Bedrock Edition			[hide]
1.20.50 — Experiment — Update 1.21	**Preview 1.20.50.21**	Added crafters behind the "Update 1.21" experimental toggle.	
	Preview 1.20.50.23	The textures of the crafter have been changed.	
1.20.60 — Experiment — Update 1.21	**Preview 1.20.60.20**	The textures of the crafter have been changed again.	
1.21.0	**Preview 1.21.0.22**	Crafters are now available without using the "Update 1.21" experimental toggle.	
1.21.20	**Preview 1.21.20.21**	Crafter craft and fail sounds now have a random pitch offset.	
		Crafter fail sound now has a max distance of 3 blocks instead of 5.	
1.21.50	**Preview 1.21.50.20**	Crafters are now mined quickly when using any pickaxe.	
	Preview 1.21.50.24	Crafters are mined faster when using an improper tool.	

Issues

Issues relating to "Crafter" 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%22Crafter%22%29%20ORDER%20BY%20resolution%20DESC).

Gallery

Mojang screenshots

A crafter activating and ejecting a cherry hanging sign.

Two crafters in a Trial Chamber hallway, with one of the crafters being freshly mined and floating as an item.

Sunny using a crafter in a jungle.

A villager farmer stands by a crafter.

Crafter automation.
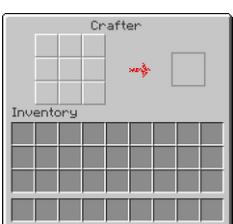
"A Redstone contraption in a Village made of Glass and Crafters that turn Gold Nuggets into Gold Ingots, which are then turned into Gold Blocks. These Gold blocks are then broken down again, feeding into another crafter, that perpetually continues the cycle."[5]
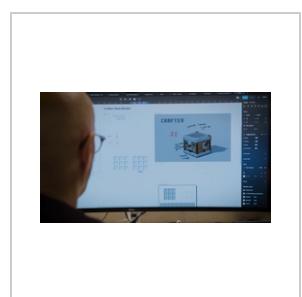
"An automated rail Crafter is producing rails. Makena is collecting the rails and Noor is building a railway."[6]

Screenshots
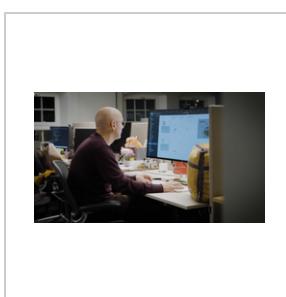
The crafter's GUI in *Java Edition* when it is triggered and with all of its slots disabled.
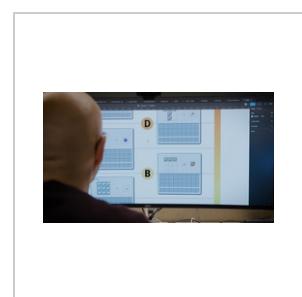
Development images

Crafter UI being developed.
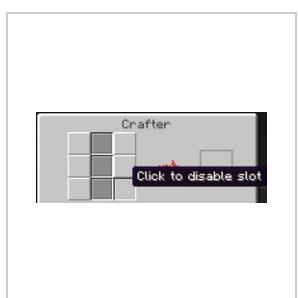
Different angle.
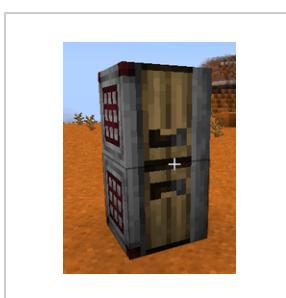
Crafter UI tested with different items.

A crafter as seen in its reveal.

Slots may be disabled by clicking on them, which is useful for automating shaped recipes.
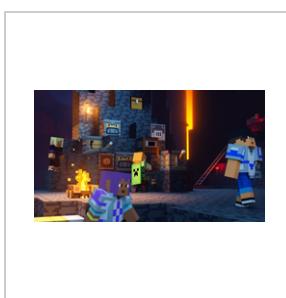
A screenshot of two crafters facing each other posted by a developer, using their old textures.
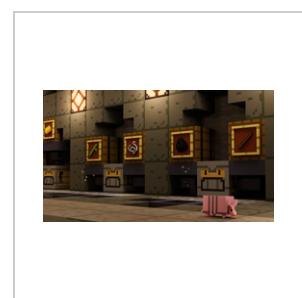
In other media

Efe crafting cakes with a crafter.
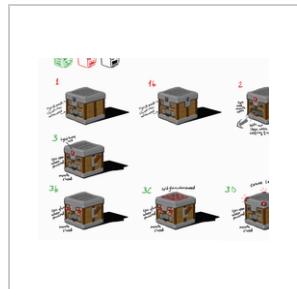
Alex using various crafters.
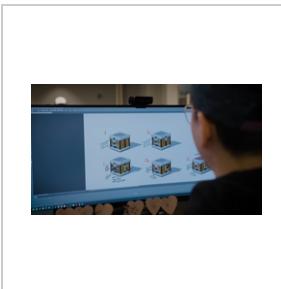
An armadillo passing by several crafters, in *A year in blocks*.
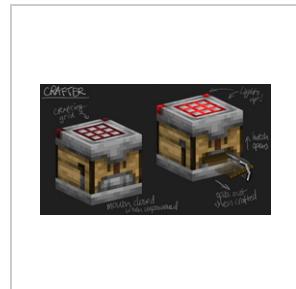
Concept artwork

Crafter concept art.   Crafter concept art.   Early crafter texture.

References

1. "Minecraft Snapshot 23w42a" (https://www.minecraft.net/en-us/article/minecraft-snapshot-23w42
   a) – Minecraft.net, October 18, 2023.
2. MC-265943 — Crafter cannot be powered above through an air block like dispensers/droppers/
   pistons — resolved as "Works As Intended".
3. "Minecraft Live 2023: Discovering the trial chambers! @ 9:31" (https://youtube.com/watch?v=8jw
   Atfyxhlk&t=571) – Minecraft on YouTube, October 15, 2023
4. MC-267149 — Crafter top face has an inverted UV texture map — resolved as "Fixed".
5. "Minecraft Java Edition 1.20.3" (https://www.minecraft.net/en-us/article/minecraft-java-edition-1-2
   0-3) – Minecraft.net, December 5, 2023.
6. "Minecraft Java Edition 1.21" (https://www.minecraft.net/en-us/article/minecraft-java-edition-1-21)
   – Minecraft.net, June 13, 2024.

External links

- "Crafting with the crafter" (https://www.minecraft.net/en-us/article/crafting-crafter) by Duncan
  Geere – Minecraft.net, June 6, 2024.

Navigation

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	Ornamental	[show]
	Natural	[show]
	Utility	[hide]

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Utilizable
Banners (Ominous) · Beehive · Beds · Bell · Bookshelf · Cake (with Candle) · Campfire (Soul) · Cauldron · Chiseled Bookshelf · Composter · Conduit · Copper Golem Statue · Decorated Pot · End Gateway · End Portal · End Portal Frame · Farmland · Fletching Table · Flower Pot · Frosted Ice · Heads (Skeleton · Wither Skeleton · Zombie · Creeper · Piglin · Dragon) · Heavy Core · Jukebox · Ladder · Lodestone · Monster Spawner · Nether Portal · Respawn Anchor · Scaffolding · Shelf · Sponge (Wet) · Suspicious Gravel · Suspicious Sand · TNT · Trial Spawner (Ominous) · Vault (Ominous)

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🟪 **Extreme metadata variants**	[show]

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