

Grindstone [Share article feedback](#)

For the allied unit in Minecraft Legends, see *MCL:Grindstone Golem*.

A **grindstone** is a block used to remove all enchancements (except for curses) from items, refunding some experience orbs. Additionally, it can repair tools, weapons and armor. It also serves as a weaponsmith's job site block.

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Obtaining




Breaking

Grindstones can be obtained using any pickaxe. If mined without a pickaxe, it drops nothing.

Grindstone	
	
	
<u>Renewable</u>	Yes
<u>Stackable</u>	Yes (64)
<u>Tool</u>	
<u>Blast resistance</u>	6
<u>Hardness</u>	2
<u>Luminous</u>	No
<u>Transparent</u>	Yes
<u>Flammable</u>	No
<u>Catches fire from lava</u>	No
<u>Map color</u> (JE)	<input type="checkbox"/> 6 METAL

Block	 Grindstone
Hardness	2
Tool	
Breaking time (sec) ^[A]	
Default	10
 Wooden	1.5
 Stone	0.75
 Copper	0.6
 Iron	0.5
 Diamond	0.4
 Netherite	0.35
 Golden	0.25

Legend

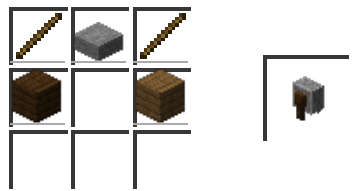
-  incorrect tool, drops nothing
-  correct tool, drops nothing or something other than the block itself
-  correct tool, drops the block itself
- italicized* can be instant mined

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

Natural generation

Grindstones naturally generate at village weaponsmiths. Grindstones can also generate in trail ruins.

Crafting

Ingredients	Crafting recipe [hide]
Stick + Stone Slab + Any Planks	



A grindstone generated inside a weaponsmith shelter structure.

Usage

A grindstone can be oriented in different directions. In Java Edition, it doesn't need a supporting block. In Bedrock Edition, it breaks if unsupported and/or inside of water.

Repairing and disenchanting

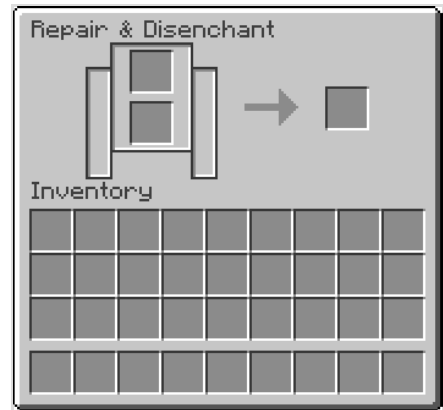
"Grinder" redirects here. For information about the grinder of mobs, see Tutorial:Mob grinder.

When used, an interface is displayed with two input slots and one output slot.

It resets the repair cost for items.

When one enchanted item is placed in either input slot, a disenchanting interface appears in the output slot. The output item has the same durability for a piece of armor or a tool. If an enchanted book is placed in the input, a normal book appears in the output. Removing the item from the output slot deletes the input item and causes the grindstone to drop some experience. If the input item has a custom name, given by renaming it, the output item will adopt the name.

Placing two tools or pieces of armor (enchanted or not) of the same type in the input slots causes a non-enchanted item of the same type to appear in the output slot. The output item has the same durability as what the player would get from using the item repair crafting recipe if the 2 input items were unenchanted. This means the output durability is the sum of the durabilities of the two input items, plus 5% of the maximum durability of the output item (rounded down), capped so it does not exceed the maximum durability of the output item. Both input items are deleted in this process of disenchanting them and repairing them. If either input item was enchanted, then removing the output item drops some experience. The output item has the same armor trim (if any) and name (if any) as the input item in the top slot.



Interface for the grindstone

The amount of experience dropped by the grindstone scales based on the modified enchantment levels of all the enchantments on both input items, and is somewhat random. For example, disenchanting a weapon with Sharpness V gives about 35 XP on average. ^[*more information needed*]

As with all non-enchanted items, the output item has no prior work penalty, even if it is cursed. Disenchanting an item in the grindstone cannot remove a curse, and cannot remove an item's custom name.

If the action is not applicable (e.g. only one non-enchanted item, or the two inputs are different items), the arrow displays a red cross like that of an anvil and no item appears in the output slot.

The following tables show the durability bonuses of various items:^[*more information needed*]

Armor

Tier	<u>Helmet</u>	<u>Chestplate</u>	<u>Leggings</u>	<u>Boots</u>
Leather	2	4	3	3
Gold	3	5	5	4
Chainmail	8	12	11	9
Iron	8	12	11	9
Turtle shell	13	–	–	–
Diamond	18	26	24	21
Netherite	20	29	27	24

Tiered tools

Gold	1
Wood	3
Stone	6
Copper	9
Iron	12
Diamond	78
Netherite	101

Other tools and weapons

Carrot on a stick	1
Flint and steel	3
Brush	3
Fishing rod	3 ^[<i>JE only</i>] <div>19^[<i>BE only</i>]</div>
Warped fungus on a stick	5
Shears	11
Trident	12
Shield	16
Bow	19
Elytra	21
Crossbow	23
Mace	25

Profession

Main article: Job site block

If a grindstone has not been claimed by a villager, any nearby unemployed villager has a chance to change their profession to weaponsmith and claim the grindstone as their job site block.

Piston interactivity

Grindstones cannot be pushed by pistons or pulled by sticky pistons.


Sounds

Generic

Java Edition:

<div><div></div>stone sound type</div> <div>[hide]</div>								
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	<i>Entity-Dependent</i>	Falling on the block with fall damage	block.stone.fall	subtitles.block.generic.fall	0.5	0.75	16
	Footsteps	<i>Entity-Dependent</i>	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 <i>[upcoming: BE 26.0]</i>	Source	Description	Identifier	Translation key <i>[upcoming: BE 26.0]</i>	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

Java Edition:

Sounds [hide]								
Sound	Closed captions	Source	Description	Identifier	Translation key	Volume	Pitch	Attenuation distance
	Grindstone used	Blocks	When a grindstone is used	block.grindstone.use	subtitles.block.grindstone.use	0.5	0.9-1.0	16
	Weaponsmith works	Friendly Mobs	Randomly while a weaponsmith is working	entity.villager.work_weaponsmith	subtitles.entity.villager.work_weaponsmith	0.5	0.8-1.2	16


Bedrock Edition:

Sounds [hide]							
Sound	Closed captions <i>[upcoming: BE 26.0]</i>	Source	Description	Identifier	Translation key <i>[upcoming: BE 26.0]</i>	Volume	Pitch
	?	Blocks	When a grindstone is used	block.grindstone.use	?	0.5	1.0
	?	Blocks	Randomly while a weaponsmith is working	block.grindstone.use	?	0.5	1.0


Data values

ID

Java Edition:

Name	Identifier	Form	Translation key [hide]
 Grindstone	grindstone	Block & Item	block.minecraft.grindstone

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID ^[i 1]	Translation key [hide]
 Grindstone	grindstone	450	Block & Giveable Item ^[i 2]	Identical ^[i 3] (Numeric: -195)	tile.grindstone.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.

Block states

See also: *Block states*

Java Edition:



Name	Default value	Allowed values	Description [hide]
face	wall	ceiling floor wall	What the grindstone is attached to.
facing	north	east north south west	The direction the grindstone is facing. Opposite from the direction the player faces when placing a grindstone on the floor or ceiling.

Bedrock Edition:

Name	Metadata Bits	Default value	Allowed values	Values for Metadata Bits	Description [hide]
attachment	0x4 0x8	standing	standing hanging side multiple	0 1 2 3	What the grindstone is attached to.
direction	0x1 0x2	0	0 1 2 3	0 1 2 3	The direction the grindstone is facing. Opposite from the direction a player faces when placing the block. <ul style="list-style-type: none">▪ 0: South facing▪ 1: West facing▪ 2: North facing▪ 3: East facing

Achievements

[hide]



Icon		Achievement	In-game description	Actual requirements (if different)	Gamerscore earned	Trophy type (PS)
PS4	Other					
		<u>Disenchanted</u>	Use a Grindstone to get experience from an enchanted item.	—	20	Bronze

Videos



History

For a more in-depth breakdown of changes to textures and models, including a set of renders for each state combination, see /Asset history



Java Edition

<i>Java Edition</i> [hide]		
1.14	18w44a	 Added grindstones. Grindstones are currently obtainable only from the <u>Creative inventory</u> and do not have any functionality.
	18w45a	Added cullface argument to the feet of the grindstone.
	18w48a	 The texture of grindstones has been changed.
		Added a <u>crafting recipe</u> for grindstones.
		Grindstones are now functional and used to repair <u>items</u> and <u>tools</u> .
		Grindstones can now remove all non-curse <u>enchancements</u> from an item, in which <u>experience</u> is reimbursed to the <u>player</u> .
		Grindstones now generate in the updated <u>plains villages</u> .
	18w49a	Grindstones now generate in the updated <u>savanna villages</u> and the new <u>snowy tundra villages</u> .
	18w50a	Grindstones now generate in the updated <u>desert</u> and <u>taiga villages</u> .
	19w03a	Added <u>sounds</u> for grindstones.
	19w11a	Grindstones now serve as weaponsmith <u>villagers'</u> job site block.
1.16	20w06a	<u>Crimson planks</u> and <u>warped planks</u> can now be used to craft grindstones.
1.19	22w11a	<u>Mangrove planks</u> can now be used to craft grindstones.
1.19.3 — Experiment — Update 1.20	22w42a	<u>Bamboo planks</u> can now be used to craft grindstones.
1.19.4 — Experiment — Update 1.20	23w07a	<u>Cherry planks</u> can now be used to craft grindstones.
1.20.5	24w10a	No longer accepts items with unbreakable component but do not have an enchantment.
		No longer disenchants two <u>enchanted books</u> at the same time.

Bedrock Edition

<i>Bedrock Edition</i> [hide]		
1.9.0 — Experiment — Experimental Gameplay	beta 1.9.0.2	 Added grindstones, but they have no functionality. They are currently only available if <u>Experimental Gameplay</u> is enabled.
		Grindstones can now generate in village weaponsmith houses.
1.10.0 — Experiment — Experimental Gameplay	beta 1.10.0.3	 The texture of grindstones has been changed.
		Added a <u>crafting recipe</u> for grindstones.
1.11.0	beta 1.11.0.1	Grindstones are now functional.
		Grindstones are no longer immune from explosions.
		They are now available outside of Experimental Gameplay.

PlayStation 4 Edition

PlayStation 4 Edition [hide]	
1.91	<div> Added grindstones.</div>
1.92	<div> The texture of grindstones has been changed.</div>

Issues

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

Trivia

- Before the grindstone was added, a different method to remove enchantments was floated for [Update Aquatic](#), which would have been by means of feeding items to a mob known as "[the Great Hunger](#)", but the mob lost the [MINECON Earth 2017](#) mob vote to the [phantom](#).

Gallery
































































Screenshots



Grindstones on a wall, floor and ceiling.

A grindstone at a blacksmith.

Navigation

	<div><div><div><div><div></div><div>Blocks</div></div><div><div><div></div><div>Structural</div></div><div><div><div></div><div>Ornamental</div></div><div><div><div></div><div>Natural</div></div><div><div><div></div><div>Utility</div></div></div></div></div><div><div>[hide]</div><div>[show]</div><div>[show]</div><div>[show]</div><div>[hide]</div></div></div></div></div></div>
Interactable	Anvil (<div><div><div></div><div>Chipped</div></div><div><div></div><div>Damaged</div></div><div><div></div><div>Barrel</div></div><div><div></div><div>Beacon</div></div><div><div></div><div>Brewing Stand</div></div></div>
	<div><div><div></div><div>Cartography Table</div></div><div><div></div><div>Chest</div></div><div><div><div></div><div>Ender Chest</div></div><div><div></div><div>Copper Chest</div></div></div><div><div></div><div>Crafting Table</div></div></div>
	<div><div><div></div><div>Enchanting Table</div></div><div><div></div><div>Furnace</div></div><div><div><div></div><div>Blast Furnace</div></div><div><div></div><div>Smoker</div></div></div><div><div></div><div>Grindstone</div></div><div><div></div><div>Lectern</div></div></div>
	<div><div></div><div>Loom</div></div> <div><div></div><div>Shulker Box</div></div> <div><div></div><div>Dyed Banner</div></div> <div><div></div><div>Sign</div></div> <div><div></div><div>Hanging Sign</div></div> <div><div></div><div>Smithing Table</div></div>
	<div><div></div><div>Stonecutter</div></div>
Utilizable	<div><div><div></div><div>Banner</div></div><div><div><div></div><div>Ominous Banner</div></div><div><div></div><div>Beehive</div></div></div><div><div></div><div>Bed</div></div><div><div></div><div>Bell</div></div><div><div></div><div>Bookshelf</div></div><div><div></div><div>Cake</div></div></div>
	<div><div><div></div><div>with Candle</div></div><div><div></div><div>Campfire</div></div><div><div></div><div>Soul Campfire</div></div><div><div></div><div>Cauldron</div></div><div><div></div><div>Chiseled Bookshelf</div></div><div><div></div><div>Composter</div></div></div>
	<div><div></div><div>Conduit</div></div> <div><div></div><div>Copper Golem Statue</div></div> <div><div></div><div>Decorated Pot</div></div> <div><div></div><div>End Gateway</div></div> <div><div></div><div>End Portal</div></div>
	<div><div></div><div>End Portal Frame</div></div> <div><div></div><div>Farmland</div></div> <div><div></div><div>Fletching Table</div></div> <div><div></div><div>Flower Pot</div></div> <div><div></div><div>Frosted Ice</div></div>
	<div><div><div></div><div>Head</div></div><div><div></div><div>Skeleton Head</div></div><div><div></div><div>Wither Skeleton Head</div></div><div><div></div><div>Zombie Head</div></div><div><div></div><div>Creepers</div></div><div><div></div><div>Piglin</div></div><div><div></div><div>Dragon</div></div></div>
	<div><div></div><div>Heavy Core</div></div> <div><div></div><div>Jukebox</div></div> <div><div></div><div>Ladder</div></div> <div><div></div><div>Lodestone</div></div> <div><div></div><div>Monster Spawner</div></div>

Redstone/
Mechanical

BE & edu only

	Nether Portal		Respawn Anchor		Scaffolding		Shelf		Sponge		Wet
	Suspicious Gravel		Suspicious Sand		TNT		Trial Spawner		Ominous		
	Vault		Ominous								
	Buttons		Wooden		Stone		Polished Blackstone		Copper Bulb		Crafter
	Daylight Detector		Dispenser		Dropper		Doors		Copper		Iron
	Wooden										
	Honey Block		Hopper		Lever		Lightning Rod		Note Block		Observer
	Piston		Sticky		Pressure Plates		Wooden		Stone		Polished Blackstone
	Heavy Weighted		Light Weighted		Rail		Activator		Detector		Powered
	Redstone Lamp		Redstone Wire		Comparator		Repeater		Torch		
	Slime Block		Target		Trapped Chest		Trapdoors		Copper		Iron
	Wooden		Fence Gates		Tripwire Hook		Tripwire				
	Allow		Border		Chalkboard		Compound Creator		Deny		
	Element Constructor		Heat Block		Item Frame		Glow		Lab Table		
	Material Reducer		Underwater TNT		Underwater Torch						
	Creative or commands only										[show]
	Removed										[show]
	Unused										[show]
	Unimplemented										[show]
	Joke										[show]
	Extreme metadata variants										[show]

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