

Grindstone

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For the allied unit in *Minecraft Legends*, see [MCL:Grindstone Golem](#).

A **grindstone** is a [block](#) used to remove all [enchantments](#) (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	
	
Renewable	Yes
Stackable	Yes (64)
Tool	
Blast resistance	6
Hardness	2
Luminous	No
Transparent	Yes
Flammable	No
Catches fire from lava	No
Map color (JE)	 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

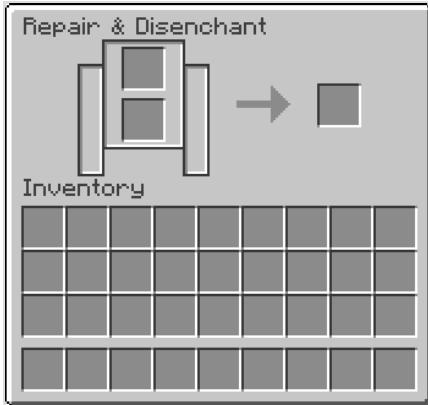
"[Grinder](#)" redirects here. For information about the grinder of mobs, see [Tutorial:Mob grinder](#).

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 disenchanted copy of the item 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	Helmet	Chestplate	Leggings	Boots
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

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

stone sound type									[hide]
Sound	<u>Closed captions</u>	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	<u>Entity-Dependent</u>	Falling on the block with fall damage	block.stone.fall	subtitles.block.generic.fall	0.5	0.75	16	
	Footsteps	<u>Entity-Dependent</u>	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**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 [upcoming: BE 26.0]	Source	Description	Identifier	Translation key [upcoming: BE 26.0]	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 statesSee 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					
		Disenchanted	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 Creative inventory 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 crafting recipe for grindstones.
		Grindstones are now functional and used to repair items and tools .
		Grindstones can now remove all non-curse enchantments from an item, in which experience is reimbursed to the player.
		Grindstones now generate in the updated plains villages .
	18w49a	Grindstones now generate in the updated savanna villages and the new snowy tundra villages.
	18w50a	Grindstones now generate in the updated desert and taiga villages.
	19w03a	Added sounds for grindstones.
	19w11a	Grindstones now serve as weaponsmith villagers ' job site block.
1.16	20w06a	Crimson planks and warped planks can now be used to craft grindstones.
1.19	22w11a	Mangrove planks can now be used to craft grindstones.
1.19.3 — Experiment — Update 1.20	22w42a	Bamboo planks can now be used to craft grindstones.
1.19.4 — Experiment — Update 1.20	23w07a	Cherry planks 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 enchanted books 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 Experimental Gameplay 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 crafting recipe for grindstones.
		Grindstones are now functional.
1.11.0	beta 1.11.0.1	Grindstones are no longer immune from explosions.
		They are now available outside of Experimental Gameplay.

PlayStation 4 Edition

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

Issues

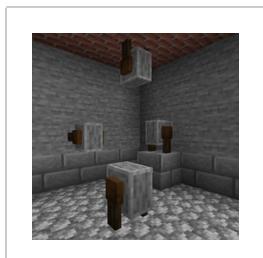
Issues relating to "Grindstone" are maintained on the [bug tracker](#). Issues should be reported and viewed there (<https://bugs.mojang.com/issues/?jqI=project%20in%20%28MC%2C%20MCPE%29%20AND%20%28resolution%20is%20EMPTY%20OR%20resolution%20in%20%281%2C%202%2C%206%29%29%20AND%20%28summary%20~%20%22Grindstone%22%29%20ORDER%20BY%20resolution%20DESC>).

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

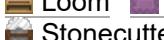
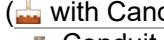


Grindstones on a wall, floor and ceiling.



A grindstone at a blacksmith.

Navigation

	 Blocks	[hide]				
	 Structural	[show]				
	 Ornamental	[show]				
	 Natural	[show]				
	 Utility	[hide]				
Interactable	 Anvil ( Chipped)	 Damaged)	 Barrel	 Beacon	 Brewing Stand	
	 Cartography Table	 Chest ( Ender)	 Copper)	 Crafting Table		
	 Enchanting Table	 Furnace ( Blast)	 Smoker)	 Grindstone	 Lectern	
	 Loom	 Shulker Box ( Dyed)	 Sign ( Hanging)	 Smithing Table		
	 Stonecutter					
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	

Redstone/ Mechanical	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
	Honey Block	Hopper	Lever	Lightning Rod	Note Block
	Piston (Sticky)	Pressure Plates (Wooden)	Stone	Polished Blackstone	Observer
	Heavy Weighted	Light Weighted)	Rail (Activator	Detector	Powered)
	Redstone Lamp	Redstone Wire (Comparator	Repeater	Torch)	
	Slime Block	Target	Trapped Chest	Trapdoors (Copper)	Iron
<u>BE & edu only</u>	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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