Minecraft

# Home (Introduction)

Minecraft is a sandbox game developed by Mojang Studios. The game was created by Markus "Notch" Persson in the Java programming language. Following several early private testing versions, it was first made public in May 2009 before being fully released in November 2011, with Notch stepping down and Jens "Jeb" Bergensten taking over development. Minecraft is the best-selling video game in history, with over 238 million copies sold and nearly 140 million monthly active players as of 2021 and has been ported to several platforms.

In Minecraft, players explore a blocky, procedurally generated, three-dimensional world with virtually infinite terrain and may discover and extract raw materials, craft tools and items, and build structures, earthworks, and machines. Depending on their chosen game mode, players can fight hostile mobs, as well as cooperate with or compete against other players in the same world. Game modes include a survival mode (in which players must acquire resources to build in the world and maintain health) and a creative mode (in which players have unlimited resources and access to flight). There is also a wide variety of user-generated content, such as modifications, servers, skins, texture packs, and custom maps, which add new game mechanics and possibilities.

Minecraft has received critical acclaim, winning several awards, and later being cited as one of the greatest video games ever created. Social media, parodies, adaptations, merchandise, and the annual Minecon conventions played prominent roles in popularizing the game. The game has also been used in educational environments to teach chemistry, computer-aided design, and computer science. In 2014, Mojang and the Minecraft intellectual property were purchased by Microsoft for US$2.5 billion. Several spin-offs have also been made, including Minecraft: Story Mode, Minecraft Dungeons, Minecraft Earth, and the most recent release Minecraft Legends.

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# Gameplay

Minecraft is a 3D sandbox game that has no required goals to accomplish, allowing players a large amount of freedom in choosing how to play the game. However, there is an achievement system, known as "advancements" in the Java Edition and Bedrock Edition of the game, "trophies" on the PlayStation ports, and simply "achievements" on the Xbox ports. Gameplay is in the first-person perspective by default, but players have the option of a third-person perspective. The game world is composed of rough 3D objects—mainly cubes and fluids, and commonly called "blocks"—representing various materials, such as dirt, stone, ores, tree trunks, water, and lava. The core gameplay revolves around picking up and placing these objects. These blocks are arranged in a 3D grid, while players can move freely around the world. Players can "mine" blocks and then place them elsewhere, enabling them to build things. Many commentators have described the game's physics system as unrealistic. The game also contains a material called redstone, which can be used to make primitive mechanical devices, electrical circuits, and logic gates, allowing for the construction of many complex systems.

The game world is virtually infinite and procedurally generated as players explore it, using a map seed that is obtained from the system clock at the time of world creation (or manually specified by the player). There are limits on vertical movement, but Minecraft allows an infinitely large game world to be generated on the horizontal plane. Due to technical issues when extremely distant locations are reached, however, there is a barrier preventing players from traversing to locations beyond 30 million blocks from the centre. The game achieves this by splitting the world data into smaller 16 by 16 sections called "chunks" that are only created or loaded when players are nearby. The world is divided into biomes ranging from deserts to jungles to snowfields; the terrain includes plains, mountains, forests, caves, and bodies of water or lava. The in-game time system follows a day and night cycle, with one full cycle lasting for 20 real-time minutes.

When starting a new world, players must choose one of five game modes, as well as one of four difficulties, ranging from "Peaceful" to "Hard". Increasing the difficulty of the game causes the player to take more damage from mobs (non-player characters), as well as having other difficulty-specific effects. For example, the Peaceful difficulty prevents hostile mobs from spawning, and the Hard difficulty allows players to starve to death if their hunger bar is depleted. Once selected, the difficulty can be changed, but the game mode is locked and can only be changed with cheats.

New players are given a randomly selected default character skin out of 9 possibilities, including Steve or Alex, but the option to create custom skins was made available in 2010. Players encounter various mobs, such as animals, villagers, and hostile creatures. Passive mobs, such as cows, pigs, and chickens, can be hunted for food and crafting materials. They spawn in the daytime, while hostile mobs—including large spiders, skeletons, and zombies—spawn during night-time or in dark places such as caves. Some hostile mobs, such as zombies, skeletons and drowned (underwater versions of zombies), burn under the sun if they have no headgear. Other creatures unique to Minecraft include the creeper (an exploding creature that sneaks up on the player) and the enderman (a creature with the ability to teleport as well as pick up and place blocks). There are also variants of mobs that spawn in different conditions; for example, zombies have husk and drowned variants that spawn in deserts and oceans, respectively.

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# Dimensions

Minecraft has two alternative dimensions besides the Overworld (the main world): the Nether and the End.

## The Nether

The Nether is a hell-like underworld dimension accessed via either a player-built obsidian portal or one of the Ruined Portals randomly generated throughout the world. It contains many unique resources and can be used to travel great distances in the Overworld, due to every block travelled in the Nether being equivalent to 8 blocks travelled in the Overworld. Water cannot exist in the Nether, as it will vaporize instantly. The Nether is mainly populated by pigman-like mobs called piglins and their zombified counterparts, plus floating balloon-like mobs called ghasts. The player can also build an optional boss mob called The Wither out of materials found in the Nether.

## The End

The End is reached by underground portals in the Overworld. It consists of islands floating above a dark, bottomless void. A boss dragon called the Ender Dragon guards the largest, central island. Killing the dragon opens access to an exit portal, which, when entered, cues the game's ending credits and the End Poem, a roughly 1,500-word work written by Irish novelist Julian Gough, which takes about nine minutes to scroll past and is the game's only narrative text and only text of significant length directed at the player. At the conclusion of the credits, the player is teleported back to their respawn point and may continue the game indefinitely.

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# Game modes

## Survival mode

In survival mode, players have to gather natural resources such as wood and stone found in the environment in order to craft certain blocks and items. Depending on the difficulty, monsters spawn in darker areas outside a certain radius of the character, requiring players to build a shelter at night. The mode also has a health bar which is depleted by attacks from mobs, falls, drowning, falling into lava, suffocation, starvation, and other events. Players also have a hunger bar, which must be periodically refilled by eating food in-game (except in peaceful difficulty). If the hunger bar is depleted, automatic healing will stop and eventually health will deplete. Health replenishes when players have a nearly full hunger bar or continuously on peaceful difficulty.

Players can craft a wide variety of items in Minecraft. Craftable items include armour, which mitigates damage from attacks; weapons (such as swords or axes), which allows monsters and animals to be killed more easily; and tools (such as pickaxes or hoes), which break certain types of blocks more quickly. Some items have multiple tiers depending on the material used to craft them, with higher-tier items being more effective and durable. Players can construct furnaces, which can cook food, process ores, and convert materials into other materials. Players may also exchange goods with a villager (NPC) through a trading system, which involves trading emeralds for different goods and vice versa.

The game has an inventory system, allowing players to carry a limited number of items. Upon dying, items in the players' inventories are dropped unless the game is reconfigured not to do so. Players then re-spawn at their spawn point, which by default is where players first spawn in the game and can be reset by sleeping in a bed (in the overworld) or using a respawn anchor (in the Nether). Dropped items can be recovered if players can reach them before they disappear or despawn after 5 minutes. Players may acquire experience points by killing mobs and other players, mining, smelting ores, breeding animals, and cooking food. Experience can then be spent on enchanting tools, armour and weapons. Enchanted items are generally more powerful, last longer, or have other special effects.

## Creative mode

In creative mode, players have access to nearly all resources and items in the game through the inventory menu and can place or remove them instantly. Players can toggle the ability to fly freely around the game world at will, and their characters do not take any damage and are not affected by hunger. The game mode helps players focus on building and creating projects of any size without disturbance.

## Other game modes

Minecraft includes other game modes such as spectator mode, which allows players to fly through blocks. Hardcore mode is a survival mode variant in which, upon death, the player may only view the world in spectator mode or return to the game’s menu. This is only available in Java edition, however. Adventure mode is a survival mode variant with possible restrictions added by a creator of a map.

<https://en.wikipedia.org/wiki/Minecraft>