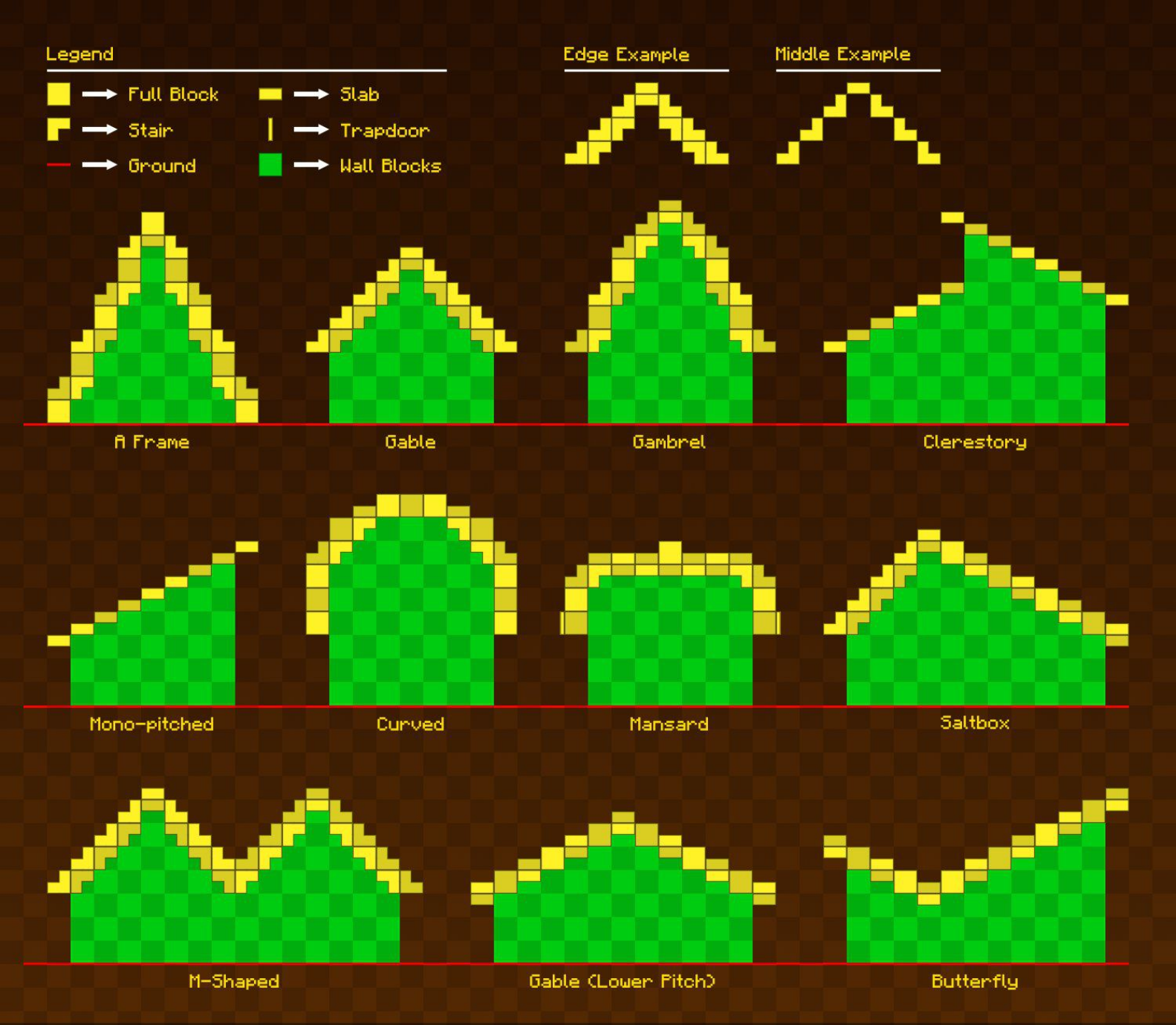
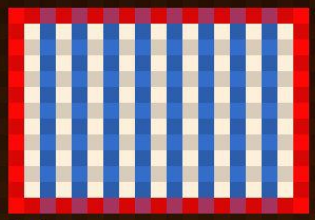
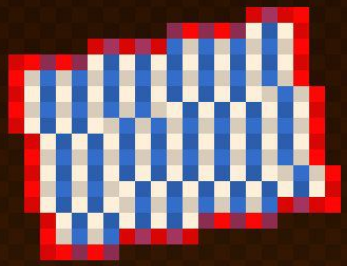


ROOF PROFILES FOR MINECRAFT BUILDERS

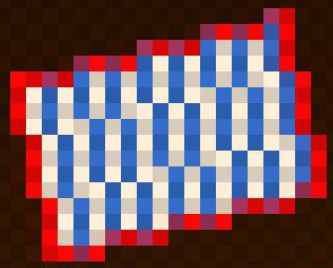
These profiles can be used as is or can be extended/enlarged by continuing the roof pattern for each side.
These profiles show the edge of the roof pattern. The middle areas don't need the extra underside blocks (see example).
Some patterns are associated with different build styles. Clerestory, Saltbox and Butterfly can have a more modern look.
Different block materials can greatly affect the overall feel of a building. Choose an appropriate block palette.
Using a different material for the edges of the roof can help better define the roof and give it some contrast.



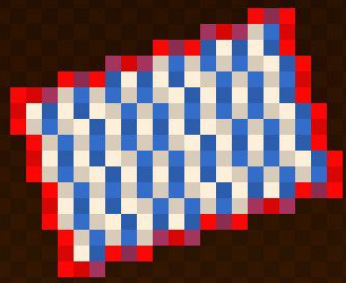
0 deg



12 deg
Step every
5 blocks



15 deg
Step every
4 blocks



20 deg
Step every
3 blocks

26 deg
Step every
2 blocks

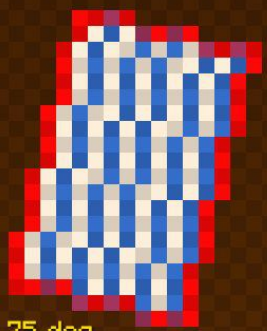
33 deg
Step 2 then
1 block

45 deg
Step every
block

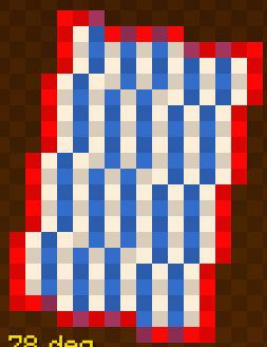
57 deg
Step 2 then
1 block

64 deg
Step every
2 blocks

70 deg
Step every
3 blocks



75 deg
Step every
4 blocks

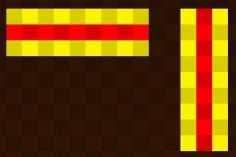


78 deg
Step every
5 blocks

ANGLED WALLS GUIDE FOR MINECRAFT BUILDERS

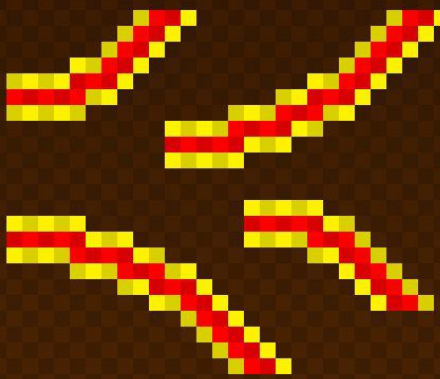
Angles listed are approximate
Adding or removing one wall length can sometimes make an awkward corner align cleaner
Try to deviate from the guide when it looks more aesthetically pleasing
Doing a quick sketch on graph paper or in creative can make the planning go much smoother
To determine specific block placement between any two points you can use the tool at: blocktools.deep-orbit.com/#path

Straight Segments

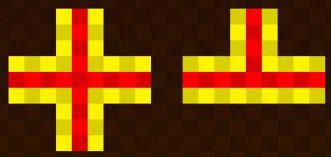


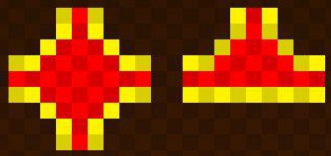
45 deg Segments

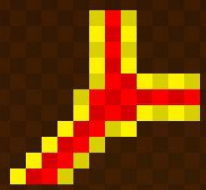
Straight to 45 deg



Intersections

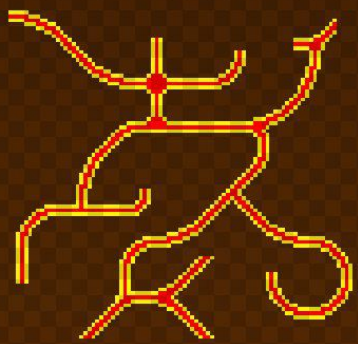






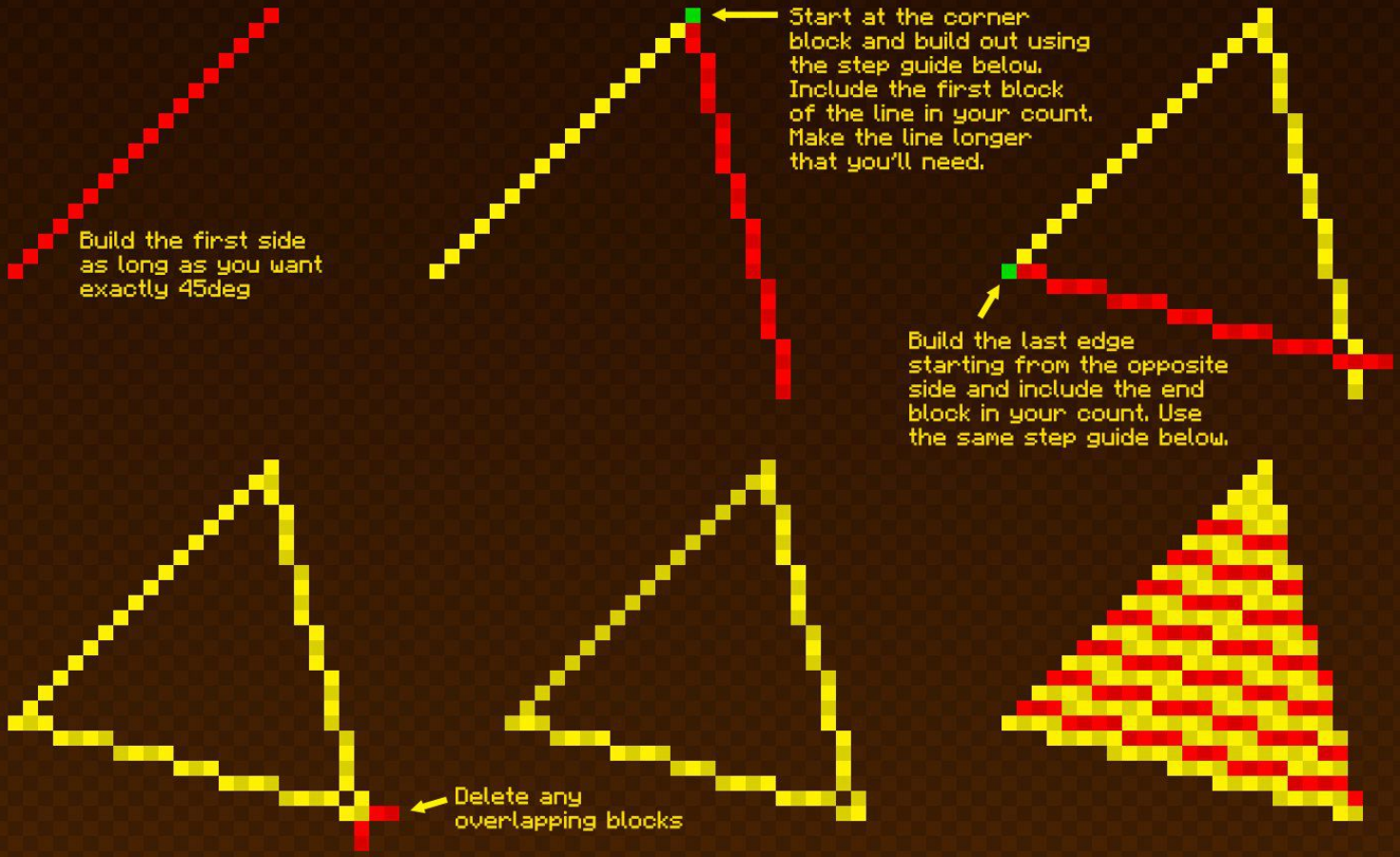
90 deg Curves

Example Path (reduced size)

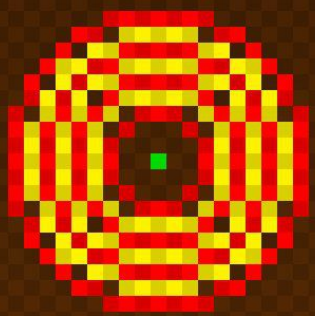


PATHS AND ROADS GUIDE FOR MINECRAFT BUILDERS

Combine the different elements to create various paths.
Rotating the elements 90 deg or connecting two curves can create interesting shapes.
Starting with a sketch on graph paper or testing in creative can help planning out the build.
These path segments are based on a 3 block width. Add blocks to increase the width in areas that might benefit from a wider section.
Some ideas would be to create paths around fountains, farms, ponds, statues or paths to hidden tunnels, etc.



Circles with odd diameters from small to large:
7, 9, 11, 13, 15, 17, 19



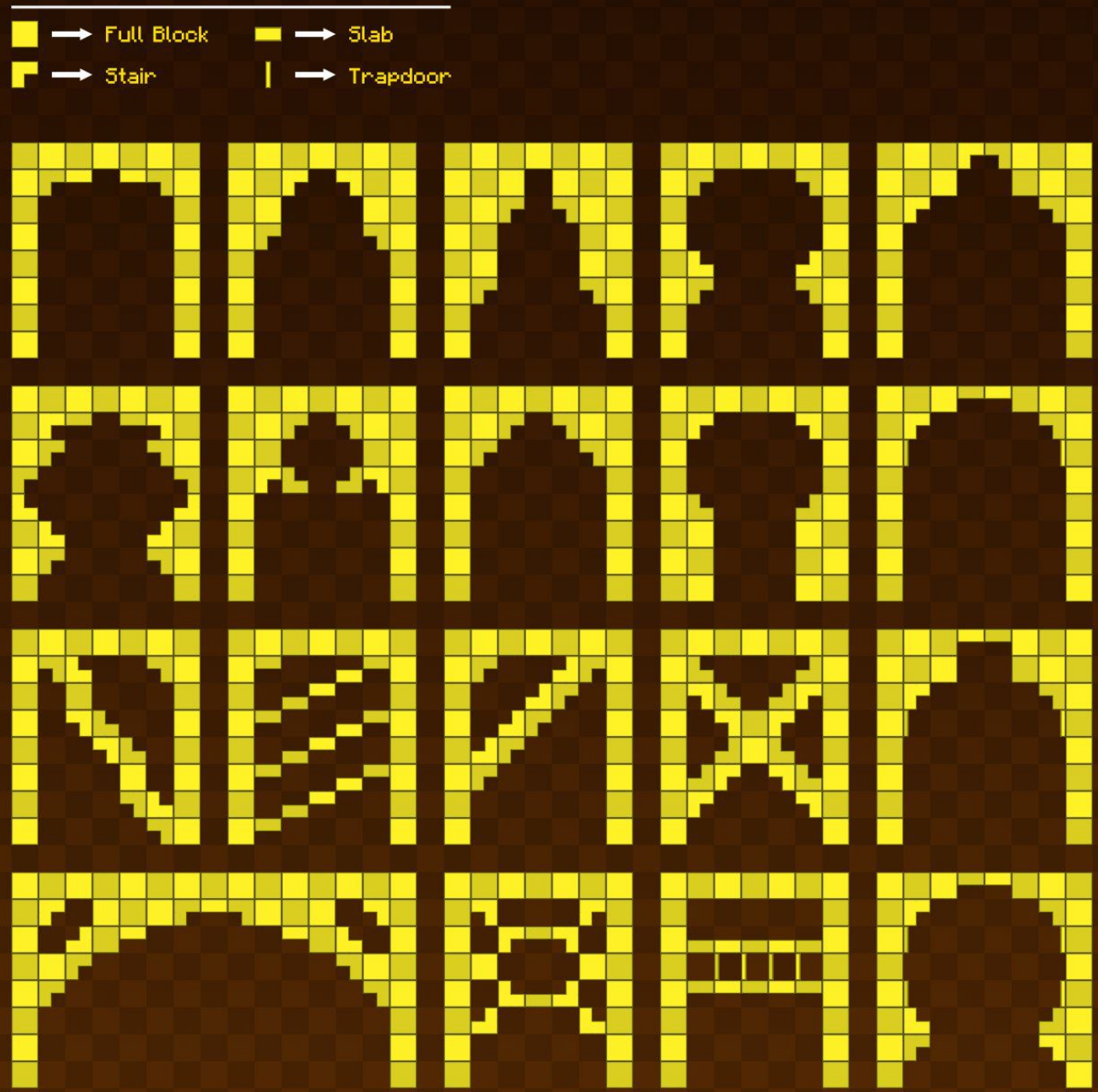
Circles Diameters
7 to 20

The green block are the centers

Circles with even diameters from small to large:
8, 10, 12, 14, 16, 18, 20

TRIANGLE AND CIRCLE GUIDE FOR MINECRAFT BUILDERS

To build the equilateral triangle use this stepping guide after you create the 45deg side.
Step: 3, 4, 4, 3, 4, 4, 4, 3, 4, 4, 4 (then repeat if necessary) Include the starting block in your count.
The longer the sides are the more like a triangle it will appear.
Doing a quick sketch on graph paper or in creative can make the planning go much smoother
To create an irregular triangle using any three points you can use the tool at: blocktools.deep-orbit.com/#path

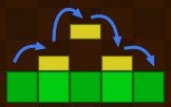


HALLWAY AND BRIDGE ARCHES FOR MINECRAFT BUILDERS

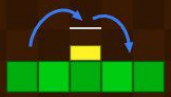
These examples can be used as is or can be widened by adding blocks to the center if needed.
You can come up with interesting structures by changing how deep the arch pattern goes through the build.
If the pattern is continuous through the structure it will appear more solid. Shallow patterns can look more like support elements.
If you have a very tall build you can stack and/or flip patterns to fill the vertical spaces.
You can layer different patterns into a build to achieve different looks especially by using different materials.

Legend

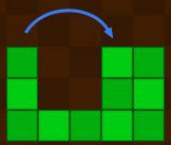
- Full Block
- Stair
- Ladder
- Fence
- 3 layers of Snow
- Slab
- Trapdoor
- Ground Blocks
- Carpet



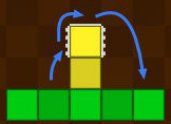
Slab Steps
Must have empty space in middle. Slabs can match palette of build. Only works in Bedrock or in Java 1.13 and earlier.



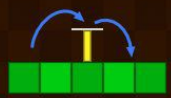
Carpet on top of a bottom Slab
Lots of color combinations. Simple to build. Easy to break by mistake.



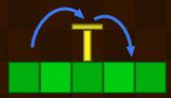
Trench
Can be made without any blocks. Very useful very early in the game. Can be very dangerous if you fall in and don't leave an easy way out such as a ladder. Must run-jump to get across.



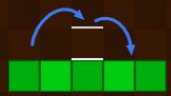
Two High Wall with Ladder
Put ladder on top block. Put carpet on top to prevent mob spawns. Can blend in with building block palette. Requires more resources. Slower to get over than other methods.



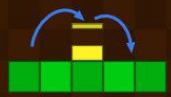
Carpet on top of Fence or Wall
Simple to build. Many color choices.



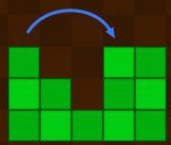
Trapdoor on top of Fence or Wall
Simple to build. Colors can match fences.



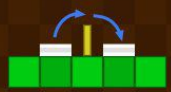
Carpet on top of Carpet
Easy to build and take down. Lots of color choices. Can be broken easily by mistake.



Trapdoor on top of a bottom slab
Trapdoors can match other wood in your build. Simple to build. Trapdoors can opened by mistake which could allow mobs to pass.



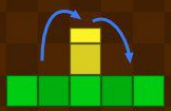
Ha-Ha Trench - one way mob access
Mobs can go across in one direction but not the other. Can be made without any blocks. Very useful early in game to keep farm animals contained without using resources. Can be dangerous if you fall in and can't jump out quickly. Must run-jump to get across.



Snow in front of Fence or Wall
Three levels of snow will allow you to jump over a fence or a wall. Shouldn't be used where snow will melt.

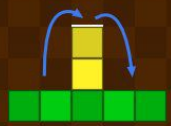
With Jump Boost I - beacon or potion

Fence or Wall

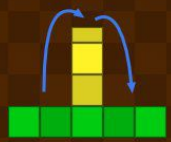


Slab on top of a full block

With Jump Boost II beacon or potion



Carpet on top of a two full block wall



Slab on top of two full blocks

BARRIERS THAT YOU CAN GET OVER THAT MOST MOBS CAN'T

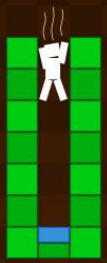
Are you tired of trying to open and then close a fence gate before a mob can get to you? Great way to keep animals from getting loose. Spiders will be able to get over these barriers. Plan accordingly!
If you have beacons in your area, using a Jump Boost can really expand the possibilities of getting over walls easily.
Try combining different solutions with regular walls, fences, or taller block sections to enhance a build.
Placing trapdoors on top of slabs in the correct orientation will allow you open two of them to allow mobs to get through when needed.

Legend

- Full Block
- Slab
- Stair
- Ground Blocks
- Ladder
- Honey Block
- Water Source
- Scaffolding
- Magma Block
- Soul Sand

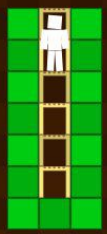
Ladders

Going down 50 blocks: 16.7s (3.0 bps)
Going up 50 blocks: 21.3s (2.4 bps)
Doesn't require any player interaction while going down.
You can easily stop at any point.
You need to place a ladder on every block.



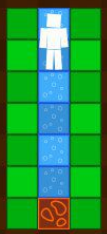
Falling

Falling down 50 blocks: 2.0s (25 bps)×
Doesn't require any player interaction.
You will take fall damage so make sure you land on something that will dampen the impact!
×bps = Blocks Per Second. This value would be for a 50 block drop. Some methods, such as falling, will have a change in speed over different distances.



Scaffolding

Going down 50 blocks: 16.9s (3.0 bps)
Going up 50 blocks: 21.3s (2.3 bps)
You can easily stop at any point.
Very easy and fast to put up.
It's difficult to see below or above you.
Scaffolding blocks are easily broken and will break every block above it if broken by mistake.

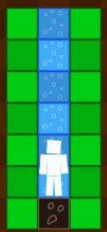


Magma Block Bubble Column

Going down 50 blocks: 10.7s (4.7 bps)
Going down 50 blocks crouching: 9.1s (5.5 bps)
Doesn't require any player interaction if you don't crouch.
You will take some damage when you land on the magma block unless you crouch.
You need to fill the column with water source blocks for the bubble column to form.

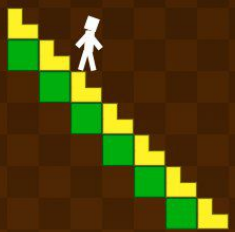
Honey Block

Going down 50 blocks: 19.7s (2.5 bps)
Doesn't require any player interaction once you are stuck to a block.
If you don't actually push into the block space you can fall instead of sticking.



Soul Sand Bubble Column

Going up 50 blocks: 4.8s (10.4 bps)
Going up 50 blocks holding jump: 4.5s (11.1 bps)
Doesn't require any player interaction if you don't hold jump.
You need to fill the column with water source blocks for the bubble column to form.



Stairs

Going down 50 blocks: 14.0s (3.6 bps)
Going down sprinting: 10.8s (4.6 bps)
Going up 50 blocks: 11.9s (4.2 bps)
Going up sprinting: 9.2s (5.4 bps)
Many different block styles to pick from to match the look of your base.
Using stairs will require more space.
Spiral staircases will be slower.

GOING DOWN (OR UP)? CHOOSE YOUR VERTICAL TRANSPORTATION METHOD!

All times were calculated by traveling 50 blocks in Survival in a real world example. (Java 1.14.4 or 1.15 snapshot for Honey Block)
Multiple trips were averaged to get final times; 5 trips for the slower methods and 10 trips for the quicker methods.
If a fast time is not essential, choose a method that will fit in with your overall design aesthetic of your base location.
Some methods don't require user interaction which can be a nice rest for the time it takes to travel.
You can combine different methods to pause the travel and make it easier to get off at different heights.