

MAPMAG

ISSUE 9 - BEDROCK

Build Bedrock Maps

What's the same, and what's different?

Minecraft's Marketplace

*We share our journey creating a new
Marketplace map*

Building Tips

Hojokono helps get you started

Map Making on a Budget

Awesome_1 shows you how

ENTER THE "MAPCADEMY"!

THE LOBBY



MapMag has a fluid relationship with *deadlines*. We think you are more interested in reading a magazine full of content made by the people who know what they are talking about, rather than flipping through a carelessly constructed compendium. This is why you can sometimes find an issue appearing several months after the last one. With all that said, this issue is perhaps the loosest to date, with the original idea for the theme causing a very lengthy deep dive into an unfamiliar world. Let me explain...

Way back in October 2017 Issue 8 was published. With a focus on the magnificent genre of Complete the Monument (CTM) maps we were able to explore one of the richest and most active communities of Map Makers on the planet. The issue was a magnificent roundup of the topic, and you can find it online today for the bargain price of 'free' if you somehow missed it at the time. This issue left us with a problem - where do you go from here?

It turns out the answer is to roll up our sleeves and dive into the previously only lightly-touched world of Bedrock Minecraft Maps. The domain of pioneers who have blazed technical trails through the space on their own without the knowledge bases that the technical masters of the Java platform have had access to: wiki, world editors, and bug fixes.

In this issue you will find guidance, tools, tips and tricks for creating your own Bedrock masterpiece in Minecraft Map form. We take you through the wonderful world of Minecraft-for-Mobiles and "snapshot" the current state-of-the-art in tools and techniques to accelerate your content creation.

Things are moving very fast, so no doubt the contents of this issue will be overturned by the time we publish. Never mind! Join us online to continue the conversation at @MapMakingMag on Twitter, or better yet - contribute to the next issue with an article or art inspired by your own experiences.

Submission Guidelines

We are interested in what YOU have to say. Content you make for **Map^{Mag}** can be sent to:

mapmakingmag@gmail.com.

The best letters, articles, art, and other work may be selected for inclusion in **Map^{Mag}** editions or on affiliate websites and other communication channels. Because **Map^{Mag}** is made by the community for the community, **Map^{Mag}** is free for readers and we don't pay you for anything. You give us permission to include your work in the magazine.

Any content you submit must be your own work, or work that you have the right to submit. By sending us your work you agree that we may edit it for readability or make changes we think are necessary for the magazine. If we decide to include your work you acknowledge that you have granted us the right to publish your work in **Map^{Mag}** and you understand that your work may be quoted or discussed on the internet by anyone in the world without limitation.

All other rights to your work remain with you. You own your work. We are allowed to use it for **Map^{Mag}**. It is that simple.

We will credit you by real name, game name, social media account, or another method that you prefer and that we mutually agree. We will not share your email address without your express permission. If you do not tell us how to credit you for your work then you may not be published in **Map^{Mag}**.

If we refer to you or your work in **Map^{Mag}** you acknowledge that we do so in good will and our intention is not to damage or harm.

DISPUTES

Writing about what you enjoy and hearing from other people with similar interests can be great fun. When people are excited about what they are doing sometimes things can get a little heated in a large community. If you have any concerns over what **Map^{Mag}** is doing or how we are doing it then please contact us describing your concern. This will allow us to understand how we can do better. We can be reached at mapmakingmag@gmail.com.

By reading this magazine you agree that the Contributors, Production Team, and anyone associated with this activity are not liable for any damages to the fullest extent permitted under law. You agree that any dispute arising from this publication is governed by the laws of New South Wales, Australia.

All about Building



Building with Usability

By hojokono

When making structures for a pvp map with tower defense or capture the flag in mind you have to factor usability in the map as well as making it look good.

A good tip is to build with two layers so you can build the structure and deal with details after you get the general shape made.

Also watch out for snow if you are in a snowy biome or are building a tall structure.

You can always use /gamerule doWeatherCycle false. If you are on a server try building with slabs as the top layer of your build.



Building with Friends

Here are some tips:

1. If you see a flat surface on your build, add to it to make it look better
2. For map making, come up with a idea that you think could be an interesting minigame or adventure map, write the idea down, and repeat till you have loads of idea. Pick one and make that map.
3. Grab a group of friends to help you, it's hard to make a map by yourself, friends are always helpful. Minecraft Realms is a great place to do this.
4. Get inspired to build. A new project can sometimes be overwhelming and you may lose hope, but you shouldn't worry about that because there is a big minecraft community where people love to play maps.



Building with Commands

When building a structure that you want to mimic on the other side of the stage for a capture the tower map, World Edit is your friend. With World Edit you can easily copy, rotate, and place anything you have built in the world. There are plenty of youtube tutorials that can help you quickly learn World Edit.

Don't shy away from commands either, they can make your map so much better by adding killstreak rewards, exploding red fireworks on kills, or just teleporter pads to the next level of the building.



Gamerules are essential to make sure your map works properly. Advancements popups are annoying and you can disable them in gamerules. If you are aiming to make it a little more challenging for your players, give them a hub in the starting lobby where they can manually disable/enable gamerules, so they can make it more difficult for themselves.

MAPPING FOR NOTHING TIPS FOR FREE

By Awesome_1
([@qcjames53](https://twitter.com/qcjames53))



I want my MTVeeeeeeeeeeeeeeeeeeeeeeeeeeee...

3D modeling programs, video editors, the game itself, all can be a substantial money sink. From Photoshop, to Sony Vegas, to Cubik Pro, it seems more and more Minecraft related services are starting to cost money. With the introduction of Bedrock as the go-to platform, maps have even become an in-game purchase! Map making in Minecraft has gotten to a point where it takes a hefty capital to do even the most rudimentary resource work beyond the base game.

Or does it?

This project was to see how far I could get on a budget of \$0.00. Even though the magazine title is “Bedrock Edition” I’m doing this in Java. Why? First of all, software concerns. But I’m also a Java loyalist. I **want** to create this on a PC. The left column details my steps, while the right column should detail any reasonable person’s progression. Proceed with caution, and please do not do what I have. Especially the Craigslist part.

THE DESKTOP

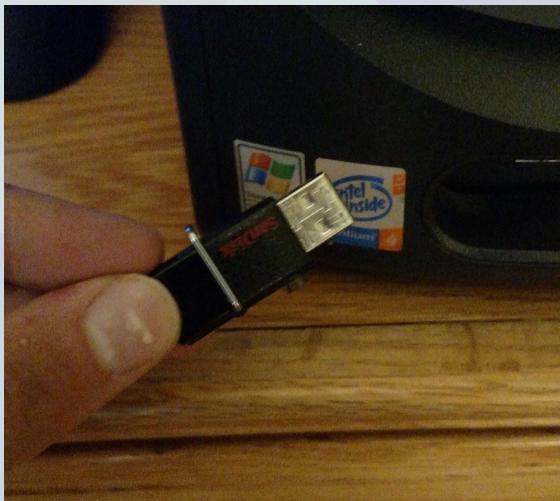
Arguably the most important component of any proper map, the desktop is the device in which you will be pouring your soul. Bigger, better specs will yield a more enjoyable, quicker experience, but any computer from the last 5 years will do just fine. Mojang recommends an Intel Core i5, a dedicated graphics card, and 4GB of memory.

What I Did

Periodically check [Craigslist's free section](#), hoping to come across an old desktop.

Here's what I came up with:

- Intel Pentium 4 540 (2004)
- 2GB DDR2 RAM
- Trendnet Modem Card
- ASUS DVD x8
- SanDisk 64GB Drive (USB 1.0 Bus)



What You Should Actually Do

Buy legitimate computer parts and assemble a desktop, or buy a pre-built unit. Online resources are usually cheaper, but come with the risk of faulty hardware and return policies.

Minimum specs (in my opinion):

- Intel Core i5 gen 4 or AMD FX-8350
- 8GB of RAM
- 256GB Storage (SSD or HDD)
- Gtx 950 or R7 370 (You don't really need a GPU)

Hey, at least it has an SSD...

DISK OPERATING SYSTEM (and genetic lifeform)

The operating system is perhaps the thing that makes or breaks a desktop's functionality. Everything boils down to support, appearance, and ease of installation. [Lubuntu](#), a Debian distro, is a perfect blend of these attributes, combining the ease of installation and support of MS-DOS with the appearance of Amiga OS. If you want a functional desktop, use Microsoft Windows. If you want a free desktop, read on.

What I Did



What You Should Actually Do

- Purchase a Microsoft Windows key from a legitimate source, such as a Microsoft store, or the Craigslist Free Section
- Windows can be [downloaded directly from Microsoft's website](#) to avoid the trolling hackers

WELCOME TO THE GAME

Now that Lubuntu is installed, it's time to get the game. First things first, we need to install [OpenJRE](#) to run the game itself. Now it is just a simple matter of going to the website and...

well...

This may be obvious, but the game is [somewhat unobtainable](#) with a budget of \$0. In a previous revision of this article, Adrian wasn't very happy with my suggestion that "piracy is OK," so we're going to have to improvise here.

Hey Erin can you send me your MC login credentials?

Don't you already have an account?

It's for MapMag

No

You'll be famous...

Whatever
UN: _er1s
P: IhaveCrippling21DEPRESSION6

artist's depiction

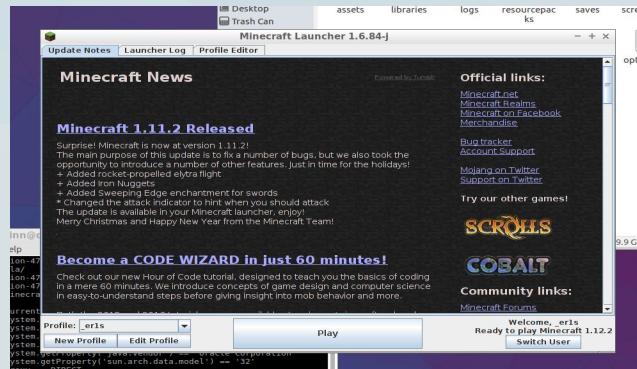
After this login, the download for a Minecraft launcher .jar file is available on the website. Once downloaded, this terminal command will install the software.

```
sudo java -jar Downloads/<installer filename>.jar
```

This command will then launch the launcher.

```
java -jar minecraft/launcher.jar
```

What I Did



What You Should Actually Do

**BUY
THE
GAME**

Wait. Is this the Tumblr launcher?

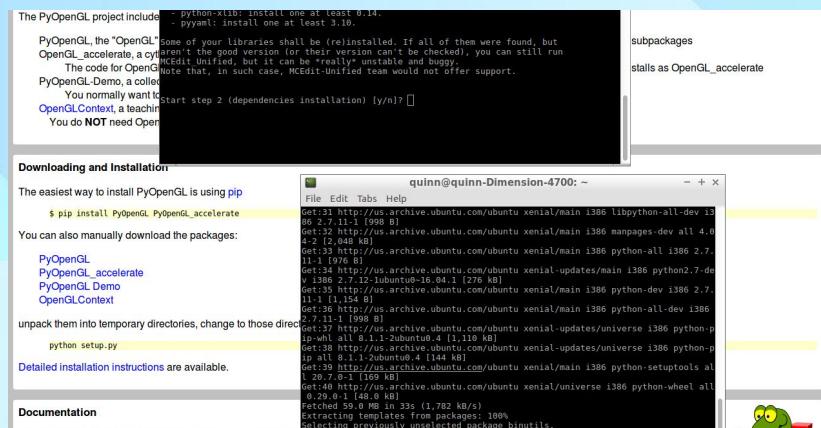


- (Run Windows)
Bonus of a free Windows 10 edition!!!



SOFTWARE

Using Linux for software installation shockingly turned into quite the process. Going in, I assumed every program was just going to need Java, Python, or maybe some obscure library. Here's a screenshot of a typical Linux McEdit installation.



Keep in mind, this is Python. There's no compilation. This is just installing eight obscure API's, each with their own required API's, to potentially get a working package in the end.

After around four hours, I was able to get these programs installed:

Map Building Software

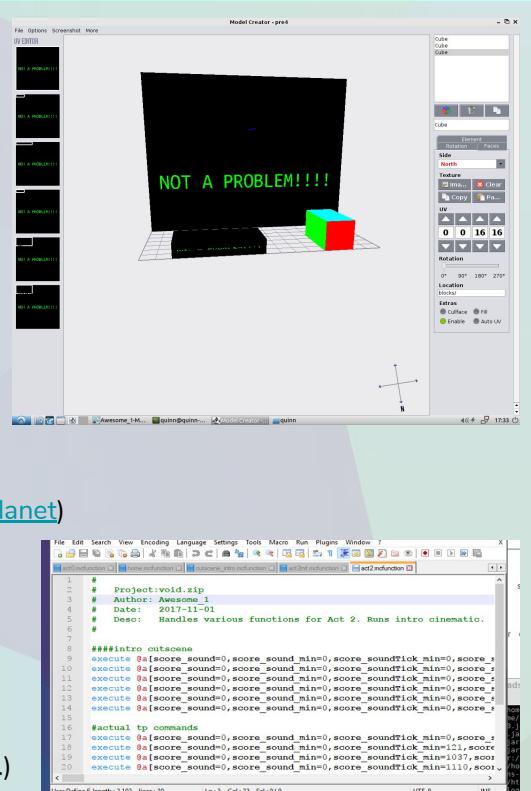
- [McEdit Unified](#)
 - Filter Libraries ([Abrightmoore](#), [TexelElf](#))
 - [World Edit](#)
 - [World Painter](#)
 - [webNBT](#)

Resource Pack Software

- [Mr. Crayfish's Model Creator](#)
 - [VanillaBurp's Model Library](#)
 - [Mr. Crayfish's Animation Creator](#)
 - [GIMP](#)
 - Texture Websites ([MaxTextures](#), [3DTexture](#))
 - [Audacity](#)
 - Background Music ([FreeMusicArchive](#), [Purple](#))
 - Sound Effects ([SoundBible](#), [FreeSound](#))
 - [Notepad++](#)
 - Minecraft Syntax Highlighting (for functions)

Video Editing Software

- **Youtube Video Editor**
 - **Lightworks** (didn't install this one, but it says it works...)



From just this small batch of programs, I realized that in the Minecraft development process, there isn't really any major software product that isn't free. This is really an anomaly in such a market-driven world. Many, many people have spent hours tirelessly coding projects, only to release them free and open source for the Minecraft community. I wish I could praise these people more, they are the ones making the internet a force for good.

TOTAL COST OF EVERYTHING

TOTAL COST OF	
MAPPING FOR NOTHING	
PURCHASE:	
GAS MONEY	\$2.54
ELECTRICITY COST	\$0.02
MINECRAFT (BORROWED)	\$0.00
DESKTOP WITH ACCESSORIES	\$0.00
MY DIGNITY	\$0.00
+%	TAX:
	\$0.00

TOTAL: \$2.56	
THANK YOU	

THE VERDICT

U CANT DO IT FREE SRY:(

WELP, NOTHING IN LIFE IS FREE

About 2 months ago I came across an [article on a blog](#) by Chris Penn. It was titled “Nothing in Life Is Free.” He discusses how everything has some price, unless we ourselves deem it intrinsically worthless. Thinking back to what I loved most, Minecraft map making, I remembered the dozens of free programs that allowed me create my work, all donated to the internet by those with time and passion. McEdit, Audacity, VLC, I was shocked at how much functionality is offered at no monetary cost. Sure, you have to buy internet. Sure, you have to buy electricity. Sure, you have to buy a PC. But for hundreds of collective people working for weeks on end to produce a buggy little Jframe applet for a game they are passionate about, that is art. I wouldn’t trade this community for any other.

At least for right now. I’ll see how this map store microtransaction thing from Microsoft plays out.

-Awesome_1
([@qcjames53](#))

Fun fact: Reading this article on a desktop already cost you around \$0.001 in electricity.



Check Out My Maps and Other Projects by Clicking Here



Bedrock Map Making Feature



The Mapcademy marketplace map

All About Bedrock

Bedrock is the game edition of the ever-popular Minecraft franchise which is playable on console, mobile, and PC devices.

With the recent release of the “Better Together” update to Minecraft, the game achieved cross-play capability. This means that if you are on Microsoft’s XBox One you can choose to join a currently running network world hosted on your friend’s Android mobile phone.

So what is all this fuss about
“Bedrock”?

A big draw for Bedrock as a creative platform is how accessible it is. The number of players on Java edition is estimated at around 25 million at the time of writing.

There are about seven non-Java players for every one Java player. *That is a lot of players hungry for new and exciting worlds to play in.*



Seven Bedrock players for each Java one!

Of course all players enjoy the game on mobile and console for a good reason: It is a great game.

Mobile gaming lets you play anywhere and at any time, without being yelled at for “always being on the computer”.

The other thing Bedrock has going for it is a simplicity of features that make it ideal for new map makers who are unfamiliar with Scoreboards, Functions, and clever Selector tricks.

About Bedrock's Marketplace

With Bedrock's Marketplace a new Map can be installed safely with a few clicks and less of a risk of malware from dodgy download sites.

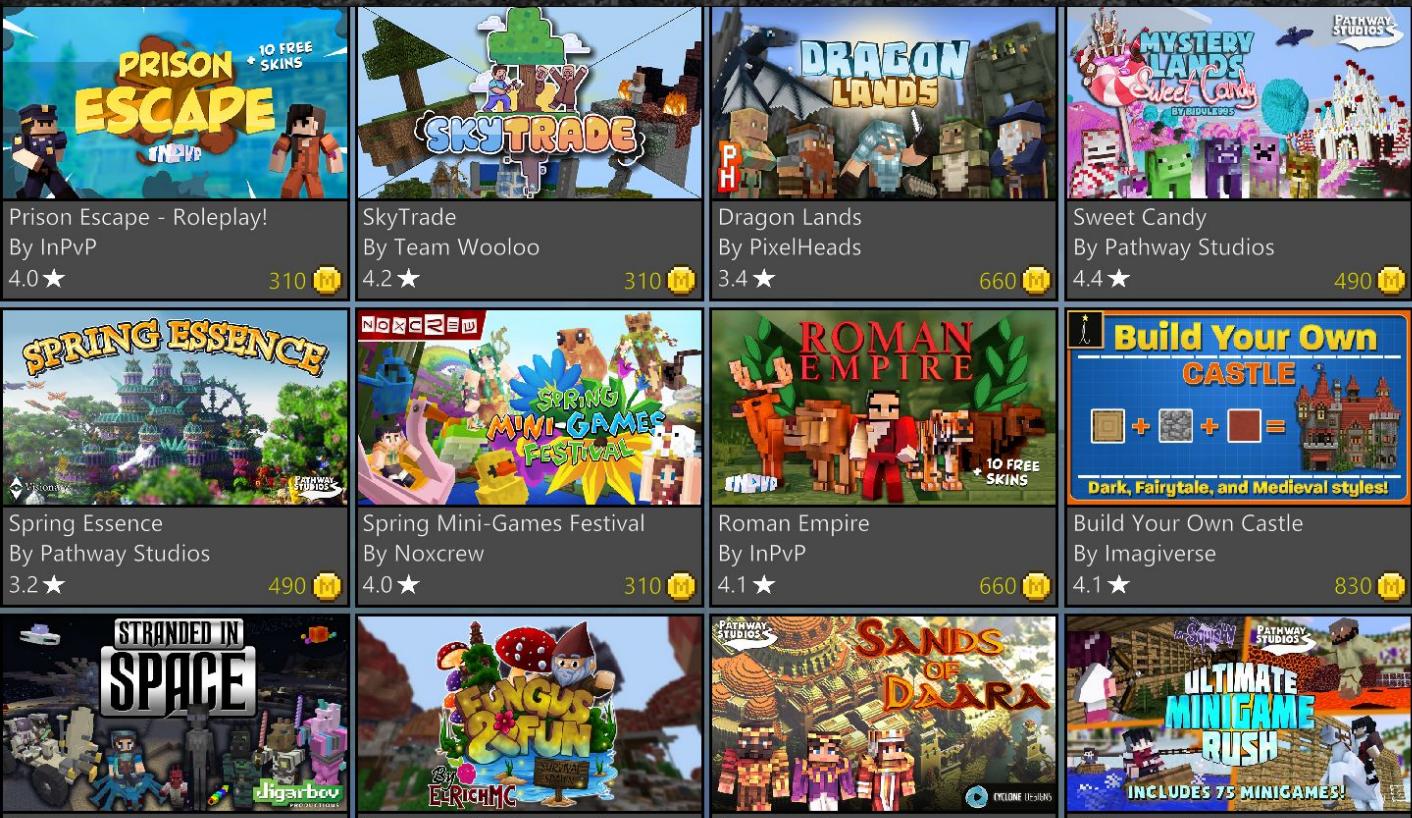
The Minecraft Marketplace is providing incentives for people to break into the game design field by using their skills at placing blocks, modelling skins, and re-texturing game assets. With a bit of thought and a strong focus on fun gaming experiences, Map Makers are able

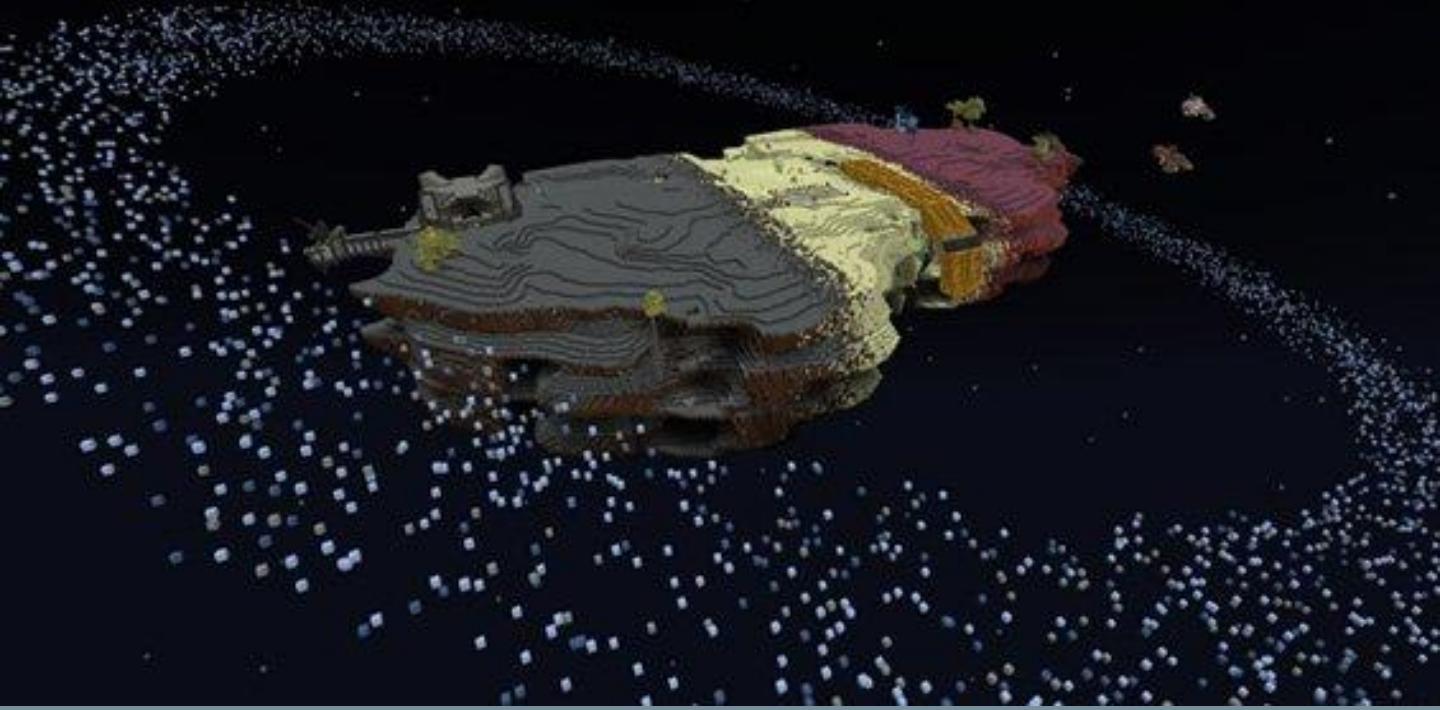
to earn a living doing what they love - building worlds for us to explore

So what about the traditional Java game?

Java is still being innovated with additional content, software architecture updates, and a vibrant modding community. The amazing place we are in right now is that we have two very viable platforms for making maps in. So let's explore, in this issue, how to do Map Making in Bedrock.

A sample of worlds available on the Marketplace





Map Maker to Map Professional

by @Jigarbov



Jigarbov

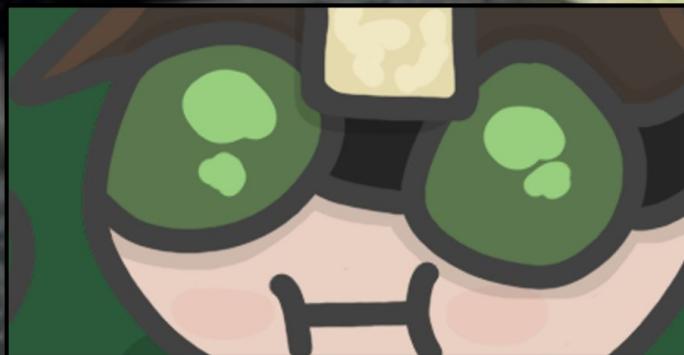
Map Maker to Map Professional

People online call me Jigarbov, I've been a map maker for a long time. In 2011 I released my first map after having played Minecraft for the year prior. My first map took 3 months and hundreds of hours. It was a labor of love and the reward was people playing the experience I crafted for them. Releasing a map is easy when you are doing it as a hobby. The steps go something like this:

1. Make the map.
2. Upload it and post a link on the Minecraft forums.

That's it.

If you consider yourself a "serious" map maker, whatever that means... I sure did, you would add in between that first and second step "test map" to make sure it wasn't broken. Most people don't, though, and it shows. The endless swath of maps on the forums is testament to that. I can't even tell you how many times I loaded up a map to have



Jigarbov is an Official Minecraft Partner

some fun only to find myself spawning in the wrong location, in the wrong game mode, wondering where the start even was, and if it would even work when i found it.

The serious map makers would put in the extra effort, and it showed.

You would spawn in the right spot. There would be clear instructions to help those that require the extra effort. When you get stuck, you find your way because you can actually trust the map maker. You know they did their due diligence and made sure the map wasn't actually broken and you COULDN'T get stuck.

Map Maker to Map Professional

There were screenshots in their thread showing some of the epic moments you could experience while playing. They made a trailer, with animated sequences that bob along with the music they meticulously put together. There's a flashy logo and BAM you know they put in the effort.

And it was still free. How did they do it? Maybe they were still at school. Maybe they were doing it for the love of it. They had time away from their life, work, responsibilities to pour hours upon hours into what they loved doing knowing they would get nothing in return except in the best of cases someone would play it and say thank you.



Free games for Bedrock from Jigarbov

When Microsoft bought Mojang AB in 2014, Minecraft on console and mobile became a serious target platform for map making. With the game redesigned for a player's ease of use, Microsoft and Mojang was able to provide a trusted channel to install new gaming content. Selected content creators were engaged from the community to use their skills to create Minecraft experiences that meet a high level of gaming quality. Through this avenue community members like myself have been able to work on the map making craft full time, sharing learnings and helping other artists improve their work.



Map Maker to Map Professional

So what's the difference?

Isn't making a map on the marketplace the same as throwing a map on the Minecraft Forum or any other avenues that people distribute their creations?

The difference is money. Not only are you asking someone to spend a few dollars on what you spent your time creating, but you're making a promise that what they're spending their money on will be worth their time. Just that one difference alone amplifies everything exponentially.

Key art you once used to show off something you thought was cool, or maybe some command blocks is now the primary method you use in order to showcase what your map is. There are specifications that the art MUST be in to be submitted. Like any gaming platform like Steam or the Apple store, there's very specific requirements. If you don't make a jpg at 1920x1080 at 70% compression with full RBG scale you might get rejected.

They can't be edited because you must give a clear view to your customers of what they will buy.

Trailers are always fun. Oh but now that music that you were using for free before? You're now using it commercially. Getting commercial licenses aren't always cheap depending who you use, and while there are free avenues, they often ask for credit. Rightfully so. But you just learned that the platform holder wants to use your trailer in a compilation that they're making... GREAT! Oh, but you can't credit the creator now. Better buy that license.



The remarkable Infinity Dungeon

Map Maker to Map Professional

That's to say nothing of the bug testing and update process. We've been fortunate so far that Bedrock has had a focus on backward compatibility and so far there has been no major issues. Except once. They changed the way clone worked for a short period of time. Infinity Dungeon EX relied on this mechanic and it had to be pulled off the store. During that time, my revenue was \$0 and all because of a small bug. The alternative? Loads of angry people who purchased a map that they can't play. Which is worse?

So whether its your fault, or theirs, the maps need to be updated for every version of Minecraft going forward. Luckily, when compared to JAVA these changes are not so drastic, nor as frequent. But the work stacks up fast. I now have 12 maps on the store. Every. Single. Update I go through and test every map, this is obviously reducing the time I have to spend on making new things, but the alternative could be career destroying.



Jigarbov and Feylina made the official 2017 Minecon Earth free map

Then there's conforming to Minecraft's E10+ ESRB rating and myriad of other guidelines put in place to both protect children and everyone who puts money into this game with a certain expectation with what they're getting.

This is no longer a hobby. It's my full time job, I'm a professional map maker. With that title comes a whole batch of new challenges I had never even considered before. What a wild ride it is.



IT'S TIME TO GO PRO.

NEW MAP-MAKING OPPORTUNITIES AWAITS YOU AT WWW.PATHWAY.STUDIO.



@PATHWAYMC

How to make a Bedrock Map



The Mapcademy marketplace map

How to make a Bedrock Map

Minecraft worlds are composed of blocks and related information that give rise to scary encounters with spooky Endermen and thrilling discoveries at the edge of the known map.

If you have never made a map before and you are choosing to use Bedrock for your first masterpiece then the learning curve is steep, but you can go on this journey by taking easy steps that build on each other.

If you are a Java Map Maker then there are a few important things to know:

- The palette of blocks available in Bedrock differs slightly from those available in Java edition.
- The way the world is stored and accessed also differs between game versions.
- And, to no-one's surprise, the data structures (implemented as NBT tags) also differ between versions.

This makes the transition of a Java Map Maker into Bedrock Map Maker quite a journey to 'unlearn' what you already know.



Anything is possible in Bedrock

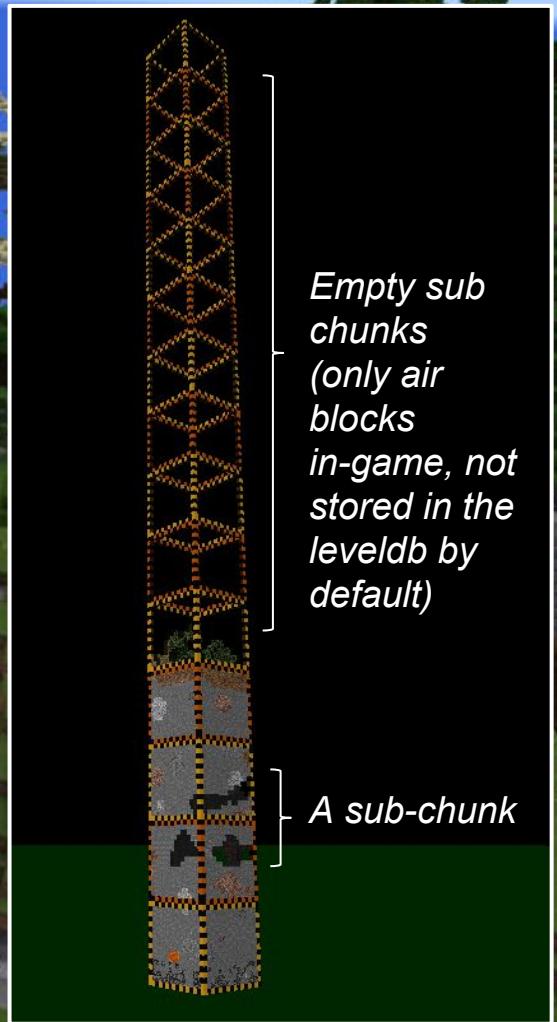
How to make a Bedrock Map

A word about Chunks

Minecraft worlds are made up of blocks and entities that are stored in 'Chunks'. Chunks are 16 wide by 16 deep by 256 high columns of blocks. On Bedrock, Chunks are further divided into 'Sub-Chunks', which are 16x16x16 cubes of 'space'.

Minecraft creates chunks only in places where the player has explored, saving off the blocks that it generates in-game for later access. On Bedrock, to save space and improve device performance, the area saved is restricted to the chunks close to the player. Anything you can see at a distance in a Bedrock game is dynamically created as you look at it and it is not stored on the device file system. This means that third party map making tools, like MCEdit, do not have easy access to in-game terrain unless the player has visited the area up close in-game.

The Bedrock game engine does not store 'sub chunks' at all if the space only has air blocks. In the current release of MCEdit Unified, these sub chunks cannot be edited since they don't exist. A common complaint from new Bedrock map makers is that they have imported a schematic using MCEdit and part of the structure is missing when they look at it in game.



Anatomy of a Bedrock Chunk

Fortunately @GentleGiantJGC has created a filter that can be used to prepare a region for editing by creating all the sub chunks needed. The 'createSubChunks' filter can be found, along with other useful map making tools, at <https://github.com/gentlegiantJGC/MCEdit-Filters/tree/master/Bedrock%20Editor%20Filters>

How to make a Bedrock Map

A word about NBT

To make a map that blends seamlessly into the in-game terrain outside your map area you will need to start with a world that you create in bedrock by pre-creating enough ingame terrain chunks for you to work on. A common method to do this is to fill large regions of space with glass using commands. Another way to do this is to move around in the world so that default terrain is created.

Once you have the basic foundation of the map, you can start to edit it using third party tools. The first step is to convert it from Bedrock to Java format. First though, a bit of detail about how Minecraft works...

When Minecraft needs to store information about something, like the various trade options for Villagers, or the equipment on an Armor Stand, or items in a particular Chest, it places special codes in a structure within a chunk that stores this information so it can be used when the player comes back into the game. If Minecraft did not store this information then every time you opened a chest to get your special Golden Sword of Looting you would find random things and probably be very unhappy.

The information part of the chunk is encoded in "Named Binary Tag" format. This is a tree-like structure of lists and values that Minecraft knows how to decode to recover persisted information. One of the things that many Map Makers like to do is to edit this information to customise the player's experience. However... the format of the NBT structures can be different between Bedrock and the types of tools that Map Makers use.

One key impact of this is that conversion of worlds between Bedrock and Java (and back) can lose information about entities, and block entities (formerly known as "tile entities"). Further, in some versions of Bedrock the game can crash or misbehave (invisible chests!) when the NBT structures are incorrect.

Good strategies for working with NBT are to create an in-game entity or block entity and use an NBT aware tool to explore the structure. We assume Mojang know what they are doing and that any tags and values we find in-game are unlikely to cause problems at run time. Other discoveries are shared between Map Makers in communities.

The other way custom entities and items can be manipulated in Bedrock is through the use of Behaviour packs. These are structured files that instruct the game engine in what pre-built logic should be applied to entities and events.



NBT is nested keys and values

How to make a Bedrock Map

Conversion between world formats

Because of the tools disparity between the world formats, it can be very useful to work with a Java world. Conversion between Bedrock and Java format worlds can be achieved with **MCC Toolchest PE** (<http://mcctoolchest.com/>), a closed-source free tool written by [@cynodontA](#). Other tools exist, and all work to varying degrees:

- **Anvil to LevelDB Converter** (Java to Pocket Edition) is based on Fast Async World Edit (FAWE), via <https://www.planetminecraft.com/mod/anvil-to-leveldb-converter-java-to-pocket-edition/> is by Empire92 who hosts a Discord for bug fix and usage discussion: <https://discord.gg/ngZCzbU>
- **Pathway Studios** has created a conversion process, with metadata, to ease the transformation between world types: <https://github.com/PathwayStudios>
- **GentleGiantJGC** has built conversion scripts that you can use and extend: <https://github.com/gentlegiantJGC/MCEdit-Filters>

One view of the workflow for building a Bedrock map is shown below in flowchart form:



Mapcademy

A Marketplace example

The Mapcademy marketplace map

The Mapcademy



CONGRATULATIONS! You have been successful in your application to the Minecraft map maker academy: MAPCADEMY.

Your first year studies will include:

- Dungeons
- Dropper
- Labyrinth
- Mob Spawning
- Death!

Worked Example: Mapcademy

To research this issue your fearless MapMag editor decided the best way to understand the process of building a Bedrock map is to dive in and do it. In the process of creating the map I spoke to numerous Map Makers and learned from their knowledge and experience.

The first step in map making is to decide on a theme that is strong enough to keep the interest level high enough that the map gets completed. Because we are a map making community, I decided to make a map about map making. What would an Academy for Map Makers be like, I wondered? There would be lots of laboratories providing the player the ability to try out many of the interesting parts of Minecraft that are important for map makers to become familiar with. And so the idea for the "Mapcademy" was born.

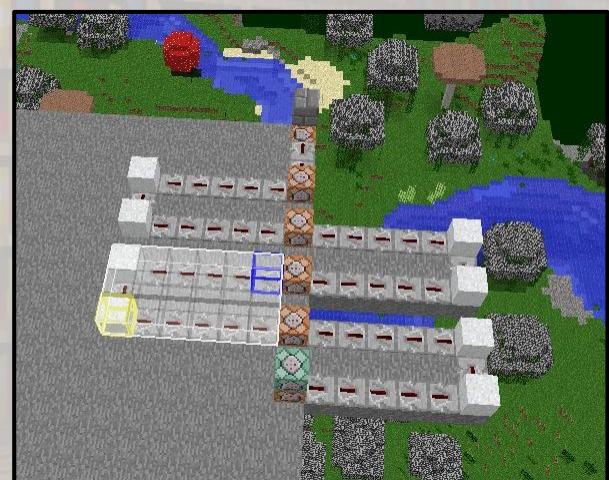
The player is a student arriving at the academy by sailing ship, and their travels through the area give them a set of experiences that together provide foundational knowledge that can be used to make their own maps. At this point I was a little light on details. I felt the theme was a good one that would keep me interested. The main problem I would find is that this theme is very open and I could easily add too much into the game and never complete the task. I had to be smart about keeping the scope realistic.

The first hurdle was discovering how to make a world that would be playable after the player finished with the main mission. To achieve this, the world had to start with Bedrock generated terrain. A small redstone and command block mechanism was built to teleport the player with a small delay in a zigzag motion on a Windows 10 Bedrock edition game. I had to use a Bedrock-only feature called a 'Ticking Area' to make this work, since the game has to keep redstone running when the player is far away from it.

Once a region of the game was generated, the map could be converted for use with Java Edition tools like MCEdit. I used @cynodontA's MCCToolChestPE to convert the world from Bedrock's leveldb format to the more familiar Anvil format. From here, it was the traditional job of building the structures I would need in the game.

The Mapcademy is on a peninsula and surrounded by bays. On the shore of one open section of water I placed a village, intended to be the student's gateway to the Mapcademy. In the bay I placed shipwrecks to explore, as well as the ship the player arrives in. I also took a gamble by placing a large maze area in the map to hide some secrets within. Mazes are challenging because they can become boring if they do not offer enough variety to keep the player interested. No map is fun if it is boring, so I had to pay close attention to the features of the maze.

To build out the main building and village I turned to the style and designs of the very clever @MCNoodlor. The unique approach MCNoodlor uses is to scale the build to the ingame player - instead of having giant doorways and windows, the build is just the right scale for you to believe you are walking through a world that is suited to you.



A teleportation device to create chunks

Worked Example: Mapcademy

Once most of the build was done, I had to think deeply about what sort of game mechanics would work properly on mobile devices and in the Bedrock engine. Bedrock commands are powerful, but limited compared to the syntax and options available in Java edition. Most of the NBT based commands are not available, so selecting entities with particular properties was out. Also, there are subtle differences in Redstone which would make it necessary to rebuild devices once converted back to Bedrock. And lastly, the Java format for Block Entities like Signs and Chests is subtly different resulting in loss of information when converting back to Bedrock with all the available tools. So I had to think outside the box.

I decided to build as much as possible in the Java edition and then write my own NBT conversion tools to copy the missing information onto Bedrock. I did this using the MCEdit filter framework to get access to the NBT data in a selection of the world through Python libraries. I also used some mapping data that was already created by the Pathway Studios team to make the process faster. A key principle of open source software is to reuse where possible instead of rebuilding from scratch. Hopefully we will see better support for Bedrock over time as more people start to extend the currently available frameworks.

I used MCCToolChestPE to convert the world back to Bedrock, and then my custom conversion scripts to load up Chests, fix Signs and populate Commands.

I had to repair Sticky Piston Heads using MCEdit Unified 1.6 Preview's Replace tool. This version has Bedrock world support.

I added in-game decals and pictures to the world to provide the player with instructions, walking maps, and clues through the use of @Texelelf's MapIt! Filter, which has been updated to work

with Bedrock by @GentleGiantJGC.

I then added rewards for the player visiting each of the laboratories and using them in the form of a scavenger hunt. Pieces of the player's graduation certificate became the object of the game and unified the theme with a purpose.

Then the map was shared for playtests. There was a flood of feedback, which is overall good though it can be challenging to avoid arguing when the responses about what-doesn't-feel-right flood in. I loaded up a spreadsheet, pasted in all the feedback, and worked through each item from top to bottom. I adjusted the location of some items, reducing the number of encounter areas, adding more features within the (risky) maze, and put books into each of the reward chests explaining again what the player had to do to 'win'. I also added more build elements to round out the player's experience.

Once the changes were made and I was happy with the result, I sent the map out again for re-testing and found that we had a game that worked.

To package the map, I needed to create a pack_manifest.json file and zip the world into an .mctemplate or .mcworld file.

The process of releasing a map through the Marketplace involves content reviews and cycles of changes that are dictated by the need to deliver a stable high quality product that works on devices with different performance characteristics. Microsoft ensures worlds don't crash your phones or consoles. Experience counts. I worked with the Pathway Studio team (@PathwayMC) who are set up to help map makers release their work to the Marketplace. Content release is a team effort. Decisions are made in the best interest of player experience and enjoyment. My best advice for new Marketplace authors is: **Be patient!**



The Mapcademy marketplace map

STEPHEN REID

@IMMERSIVEMIND

Immersive Minds

ICT in Education...

Using technology creatively to enhance learning across the entire curriculum and...

-  Outdoor Education
-  Employability
-  Environmental Science
-  Study Skills
-  Motivation/Aspirations
-  Alcohol Awareness
-  Anti-Bullying/Cyber-Bullying
-  Entrepreneurship
-  Internet Safety
-  Social Media Engagement



Pioneering Games-Based Learning...

Using games and play to enhance and support curriculum learning and life skills development, in children and adults...



Minecraft in Education...

Using Minecraft to support learning across the curriculum...

A global Minecraft server dedicated to training and supporting teachers and parents.



Working with people to develop skills for:

- Work
- Learning
- Life



Communication

Citizenship

Critical Thinking

Numeracy

Analysis

Evaluating

Teamwork

Problem Solving

Creativity

Literacy

Negotiation

Justification

Empathy

Decision Making

Enterprise

Self Confidence

Judgment

Guinness World Record
Most Downloaded Minecraft Project



Diversity 2.

<https://mods.curse.com/worlds/minecraft/224139-diversity-2>

About the Magazine

This project is a community driven and contributed magazine. By publishing we seek to develop the wonderful craft of Minecraft Map Making. All content remains the property of the respective author and is used with permission. All trademarks referenced in this publication remain the property of the respective trademark holder.

The Map Mag Team

MapMag includes Articles and Art from:

@abrightmoore
Hojokono
Awesome_1 (aka @qcjames53)
@jigarbov
@PathwayMC

Assistance in this production was provided by the Bedrock Map Making Community

This issue was re-released to improve readability.

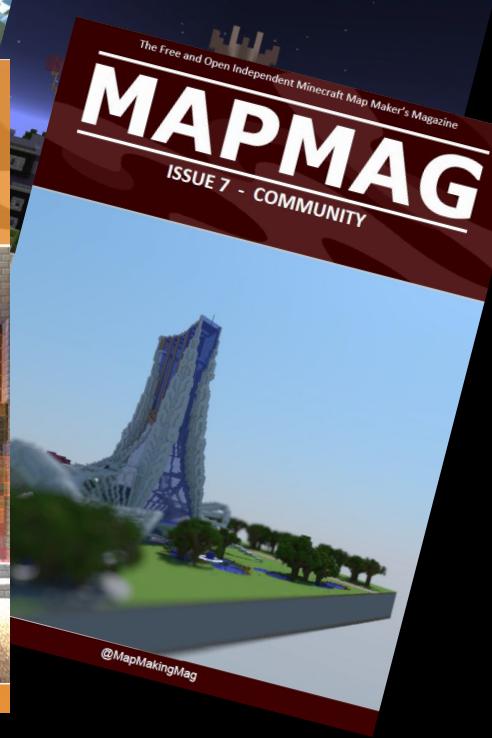
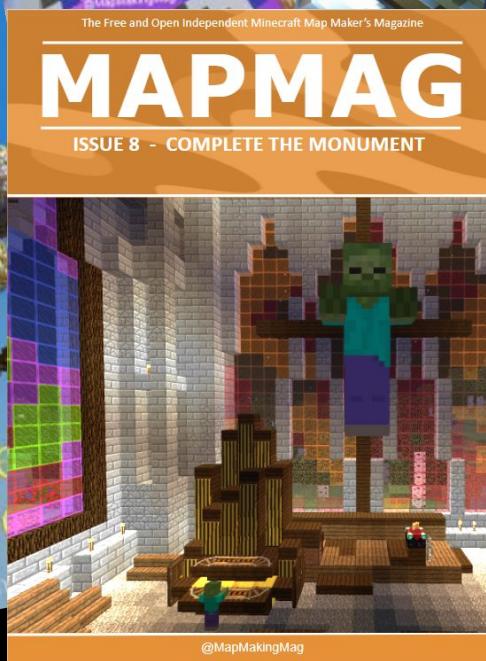
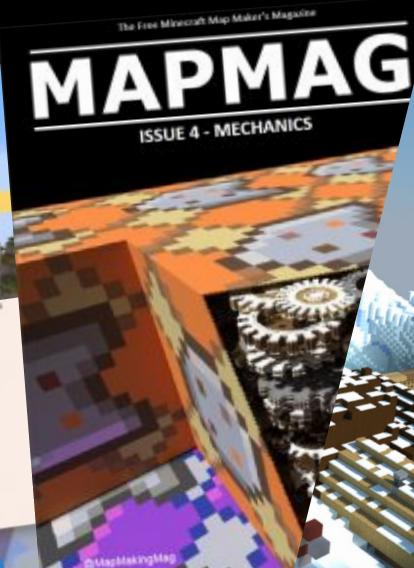
@... your name could be here - write an article or provide art for future editions! See submission guidelines in The Lobby.

This publication is a community effort and this issue has been compiled with input from the Minecraft Map Making community.

MapMag is supported by donations from: @immersiveminds and @cocoamix86

MAPMAG

ISSUES 1-8



<http://www.testfordev.com/MapMag>



[@MapMakingMag](#) | MapMakingMag@gmail.com

Images remain Copyright of their respective authors. We use Chunky by Jesper Öqvist and the community (<http://chunky.llbit.se/>) for renders.

We use MCEDIT by @Codewarrior0 and the community (<http://www.mcedit.net>) in the preparation of MapMag