Tynker: Quick Start Minecraft Camp Guide

Welcome to Tynker's Minecraft Modding camp/after-school course. With this course, your students will go from little or no programming experience to confident coders who can express themselves creatively with modding. They'll learn how to create custom resource packs, use code blocks to build mods, program simple mods, use the drone tool to construct buildings programmatically, and code full multiplayer Minecraft games in Tynker. Students can deploy their mods and resources to their own private server within the Tynker multiplayer server.

This guide will teach you how to:
1. Set up your students' Minecraft servers
2. Invite friends onto a server
3. Design custom skins
4. Build mods with the Mod Designer
5. Manage your mods
6. Publish and remix
7. Troubleshoot any issues

For information about how to set up classrooms, import students, assign lessons, and access teacher guides, see our Quick Start Camp Teacher Guide. If you are a camp administrator, see our Quick Start Camp Admin Guide.

What's Included with Your Tynker Minecraft Camp Course

- 10 scaffolded, self-guided lessons, approximately one hour each
- 5 additional DIY projects that kids can work on if they finish a lesson early
- 15 lesson guides: one for each lesson, plus one for each additional DIY project, that will teach you what is important to emphasize and how you should teach important concepts
- A private Minecraft server for each student, accessible through the Tynker multiplayer server

Each student's private Minecraft server has the following properties:

Server Time	2400 minutes total
Expiration Date	2 months after first Tynker Minecraft lesson is accessed
Friends Allowed	20
World Size	Extra large

Skins and Resources	Unlimited

Requirements

- A computer (desktop or laptop) capable of running Minecraft for each student
- A Minecraft client and login for each student (this must be the classic Minecraft, not the Xbox, Windows 10 Beta, or Pocket Edition)
- A Tynker camp administrator account for yourself
- A Tynker student account for each student

Recommended Practices

- We recommend spacing this course out over at least one week and no more than two months. Your students' time on their private Minecraft servers will expire after two months.
- If you're running a one-week camp, assign two lessons per day. When you assign a lesson, all students will have access to that lesson. You should assign lessons in order because they build on each other.
- Remind students that they have limited time to access their private Minecraft server, so they should be careful with how they use it! Each student has 2400 minutes on their private server over the next two months (starting when the student first accesses a Minecraft lesson in Tynker).
- Assign additional DIY projects (such as the Lucky Block mod) whenever students finish early. These are especially helpful if you have 6th-8th graders, who may be able to grasp concepts more quickly.
- Review the teacher guide before each lesson so you have a sense of what students will be working on and what issues you should anticipate. This is also a good opportunity to familiarize yourself with the concepts they will be learning.
- Do each lesson yourself before assigning it to students, including all the extra suggestions at the end of the DIY projects. This will make it much easier for you to help students as they have questions. You can also experiment further with the concepts in Tynker's Mod Designer.
- Pull up the answer key for each lesson before class so you have it available if students run into any issues.
- For the most part, students should be able to progress through lessons independently. This frees you up to help younger or struggling students, as well as to creatively brainstorm with kids about how they can improve their mods and games.
- Tynker's lessons intentionally do not check whether a student's DIY project is "done" because this would require checking against a single completed sample to see whether the project matches exactly. This would discourage students from customizing projects, which we hope they will do. However, this means that the system will mark a DIY project

as complete as soon as the student clicks the "I'm Done" button on the last slide of the tutorial, even if they haven't completed the entire tutorial. It is up to you to check that students are actually completing DIY projects. A good way to do this is to ask them to show off their completed projects. This will encourage them to complete the project as well as to make it their own!

● At the end of each lesson, review the key vocabulary from that lesson and see if there are any gaps in understanding.

Set Up Your Students' Minecraft Servers

Your students need to already have Minecraft accounts for PC/Mac that they have bought from Mojang. You must also create Tynker student accounts for them.

Here is how each student will need to set up their private server within Tynker:

1. Log in to your Tynker account and go to the Minecraft tab.

2. Enter your Minecraft username. If you don't know your username, you can find it by opening Minecraft. You'll see your username at the bottom of the launcher screen. Make sure you spell the username correctly (including capitalized letters and special characters).

3. Enter your world name. It can include upper and lower case characters, underscores, and dashes, but it cannot have any spaces. Your world name can't be the same as anyone else's.

4. Open Minecraft and choose the Multiplayer option on the main screen.

5. Click "Add server" and type in Tynker for the name and mc.tynker.com for the address, then join the server.

6. When you enter the server, you'll be in Tynker's lobby. From here, enter your own server by typing /join. The first time you do this, it may take up to a couple of minutes to load your world.

Now you're in your own private Tynker server. Any mods you create on Tynker will be available from this world. Your friends will only be able to join your server if you add them through your "My Server" tab in Tynker.

Invite Friends onto a Server

Each student will be able to invite up to 20 friends or other students onto their private server. Other users can only get on a student's server if they are whitelisted from the "My Server" console. Here's how a student can allow a friend into their server:

1. Log in to your Tynker account and go to the Minecraft tab.

2. Click "My Server" at the top right of the screen.

3. Go to the "Friends" section and add your friend's Minecraft username.

4. Tell your friend to add the Tynker server in the same way you did (in Minecraft, choose the Multiplayer option, add the Tynker server with mc.tynker.com as the address). From the lobby, they can type /join YOUR_WORLD_NAME to enter your world. They will only be able to access your server when you are already on the server.

From this screen, you can also delete any friends if you no longer want them to have access to your server.

Design Custom Skins

With Tynker's Minecraft tools, your students can create custom skins, items, blocks, and mobs.

1. Log in to your Tynker account and go to the Minecraft tab.

2. Go to the "Skins" area and click "Create New Skin."

3. Choose a skin template to start with.

4. Name your new skin by typing in the field at the top left of the screen.

5. Start drawing.

At the left, you can choose a color from the palette or create your own palette.

At the top, you have the five drawing tools. From left to right, they are:
- **Pencil**: Paint a solid color one block at a time.
- **Texture Brush**: Paint one block at a time while slightly changing the color to give you the "Minecraft" look.
- **Eraser**: Erase what you've made.
- **Paint Bucket**: Fill in solid areas with a single color.
- **Eyedropper**: Select a color that's already on the skin, which you can then use to paint.

The block diagram on the right allows you to make one part of the skin temporarily invisible so that you can paint behind it. For example, if you want to paint the side torso of your skin, you can make one of the arms temporarily invisible by clicking the arm on the diagram. This allows you to edit areas of the body that are covered by other body parts.

At the top, you also have an undo and redo button to undo or redo recent changes.

You can pan around your skin to see it from different angles by clicking and dragging in the white space next to the skin.

6. When you're happy with your skin, click "Save Skin." The skin will automatically be published to the community so that others can view, like, and remix your skins.

7. From your Skins page, hover over the skin you want to use and click "Use." This will download the file as a .png image.

8. Note whether your skin is an "Alex" or "Steve" template. You can find this information by clicking on the skin. It will tell you which template you're using under the diagram on the right.

9. Go to minecraft.net and log in to your Minecraft account.

10. Click on your email at the top right of the screen and choose "Profile" from the drop-down menu. Choose whether you've worked from an "Alex" or "Steve" template. Then click "Choose File" and choose the .png image that you've just downloaded and hit "Upload."

When you go back to Minecraft, your skin will automatically be available. You can see it in third person with the F5 key.

Build Mods with the Mod Designer

Students can create custom mods for Minecraft and easily deploy them to their servers. When they're first starting out with modding, they should follow the lesson plan, which will guide them through how to use the tools and how to create mods. Here's how to create a mod from scratch:

1. Go to the Mods section and click "Create New Mod."

2. Use the code blocks on the left to program your mod.

3. When you're done, click "Save" and click "Save and Deploy" in the pop-up dialogue.

That's it! As soon as you join your server in Minecraft, your mods will be available to use.

Manage Your Mods

Students may find that their mods conflict with each other, so they need to turn some mods off. They can control which mods are active from Tynker.

1. Log in to your Tynker account and go to the Minecraft tab.

2. Click "My Server" at the top right of the screen.

3. In the section called "Installed Mods," deactivate or activate your mods.

Publish and Remix

Skins Publishing: Any skins or resources you save will automatically be published to the Tynker community for others to view, like, and remix. You can see what has been recently published to the community on the Skins, Items, Blocks, and Mobs pages.

Mod Publishing: Coming soon!

Minecraft Modding FAQs

What does each student need in order to use Tynker's Minecraft modding?
Each student needs a Minecraft account purchased from Mojang and must have Minecraft installed on their computer. Tynker does not currently support modding Minecraft Pocket Edition or Xbox Edition. You can only create Minecraft mods on a desktop, laptop, or netbook (such as Chromebook) computer. Tynker courses are not supported on tablets.

Does Tynker's Minecraft modding work with Minecraft Pocket Edition/Console Edition/Windows 10 Edition?
Unfortunately, our courses currently only work with classic Minecraft for PC/Mac/Linux (not any of these other editions).

Why can't I get in to my server?
Students should be able to join their worlds by going in to the Tynker hub world and then typing "/join" in to the command line.

If this doesn't work, check the following things:

1. Does the student have a Tynker student account set up? If not, create one for them.

3. Has the student connected their Tynker account with their Minecraft account and named their world? If not, log in to the Tynker account and go to the Minecraft dashboard. Link your Minecraft account and set up your world.

4. Did you misspell the Minecraft username? Go to the "My Server" tab in Tynker to check whether you entered your Minecraft username correctly in Tynker. Make sure the capitalization is correct and you have no extra spaces.

Do friends need to have a Tynker account?

No. To join a server, friends do not need a Tynker account. They only need a desktop version of Minecraft that they have bought from Mojang. You can add them to your server from your "My Server" tab, then they'll be able to enter the Tynker server and join your world.

If your friends want their own Minecraft servers, they can create free parent-verified Tynker accounts or they can purchase a Tynker subscription.

Can I change my Minecraft username and world name in Tynker?
Yes, just log in to Tynker and go to your Minecraft dashboard. Go to the "My Server" tab and you'll be able to edit your Minecraft username and world name.

How can a student reset their world?
Go to the "My Server" tab and click the "Reset World" button.

How do I remove all mods?
Log in to your Tynker account and go to the Minecraft tab. Go to the "My Server" tab and deactivate all mods.

How can a student uninvite friends?
From your Minecraft dashboard, go to your "My Server" tab. In the "Friends" section, you can remove anyone from your approved list.

Why can't a student add more friends?
They've probably added as many friends as they're allowed. Go to the "My Server" tab to remove friends from your allowed list and you'll be able to add more.

Why can't a friend get into the server?
Friends should be able to join your server by entering the Tynker hub world and typing "/join YOUR_WORLD_NAME" but if this doesn't work, try these things:

1. Make sure you've added the friend to the approved friend list in your Minecraft dashboard.

2. Check whether you've spelled their usernames correctly (including capitalization, spaces, and special characters).

3. Make sure they are connecting to the Tynker server correctly.

4. Make sure they are typing in your world name correctly once in the Tynker server (including capitalization, spaces, and special characters).

Any questions? We're here to help!

If you have any issues or questions, just send us an email at support@tynker.com.

Tips for contacting support:
1. Let us know what browser, operating system, and machine you're using.
2. If your question is about a specific lesson, specify which course and lesson you're using.
3. If your question pertains to a specific account or project, let us know the username and project name.
4. Provide us a screenshot of what's going wrong if applicable.
5. If you're receiving an error message, tell us what the specific error message is.
6. If you're having problems onboarding students, send us the CSV file you're using.

Thanks for using Tynker!