COMPUTING WITH MINECRAFT 1: THE AGENCY

Student workbook

education.minecraft.net

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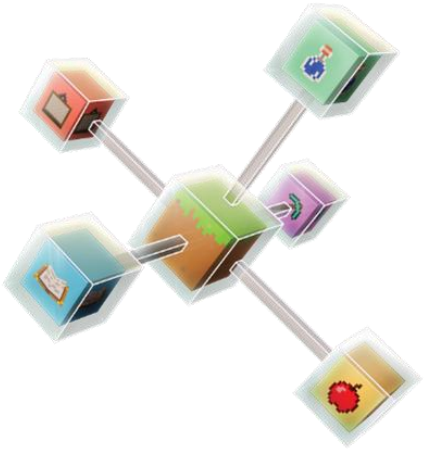
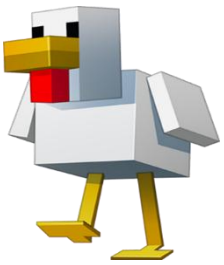
Glossary of key terms ..... 错误!未定义书签。



Moving around in Minecraft

Using your mouse

Move the mouse	→	Look around
Left mouse button	→	Mine or attack
Right mouse button	→	Use a piece of inventory
Scroll wheel	→	Toolbar selection



Using your keyboard

W	Moves your player forward
A	Moves your player left
S	Moves your player backward
D	Moves your player right
E	Opens your inventory
Q	Drops an item

Space	Makes your player jump
Shift	Hold to make your player crouch
Esc	Pauses the game or exits chat mode
1 - **9**	Toolbar selection

Your turn to play

- Experiment with the keyboard and mouse controls.
- Look and move around in the game.
- Play with your inventory.
- Build and mine.

Lesson 1: Code a conversation with your Agent & teleport him

Coding lets you be the boss of a computer! You tell it what to do by giving it instructions. *Code* or a *computer program* gives instructions to a computer to do something. A computer can be a laptop, tablet, smart phone or TV, or any kind of computer. Even robots!

Tip: Coding and computer programming mean the same thing.

Solving a problem by breaking a task down into a series of specific steps in a specific order is called an *algorithm*.

Coding needs algorithms too. We need to write code in a specific order to create the intended outcome with the computer. The wrong order could tell the computer to do the wrong thing.

What steps do you follow to make an egg and tomato dish?

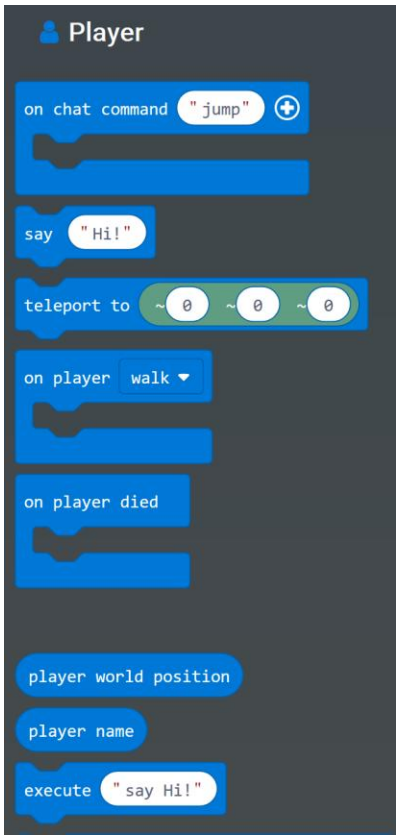
Write your ideas here:

Code a conversation with your Agent

Let's code a simple program of a conversation in the game with on chat commands.

Guided practice

1. Select the PLAYER toolbox drawer from the left-hand menu.

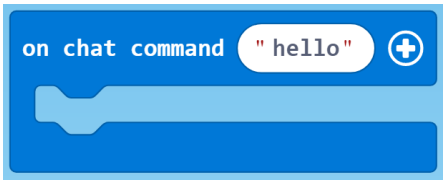


The PLAYER toolbox drawer offers players a series of code blocks that relate directly to you as the player.

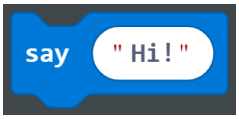
The on chat command block is one of the most used of all the code blocks. It sets a command that you later type into your in-game chat function (engaged by pressing the **T** key).

An on chat command triggers or runs the code when you type the appropriate command. The text you type in any of these boxes is case sensitive.

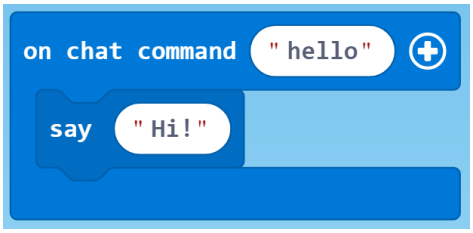
2. Rename the **run** element of this block to **hello.**



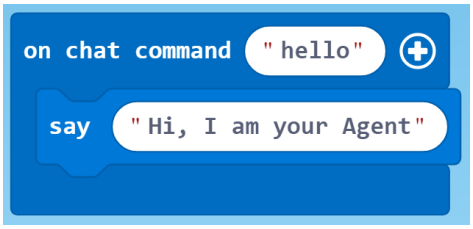
3. Return to the PLAYER menu on the left and drag the **say** block to the main coding window.



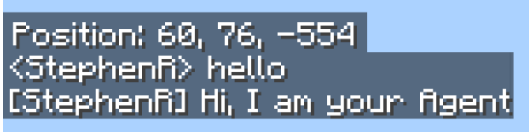
4. Drag the say block into the on chat command block to activate it.



5. Rename the **Hi!** element of the say block to **Hi, I am your Agent**.



6. Now test your code. Return to the game and press **T** to open the chat function, then type **hello**. You should see both your own chat as well as **Hi, I am your Agent.**



To close the chat command field in Minecraft, select **Exit** at the top left of the screen or hit **Esc** on the keyboard. This allows you to move the player around to see all the chickens.

Semi-guided practice

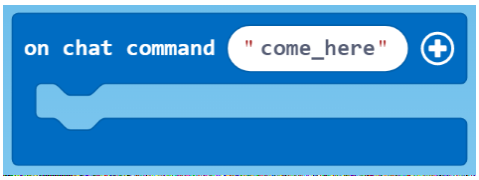
Now, create multiple strings of conversation to practice giving your Agent on chat command instructions.

Use an underscore between each word when giving the Agent an instruction in the on chat command block. This text is called a string or syntax and does not recognise spaces. Use an underscore whenever you use more than one word.

It's time to meet your Agent! In this activity, you'll code to summon your Agent to your exact location in the game. Use this command anytime you want to bring your Agent to you to begin another action, like breaking down a wall, building something, solving a maze, and more.

Coding activity: Code to teleport your Agent

1. Start a new project and rename the **run** element of the on chat command block to **come_here**.



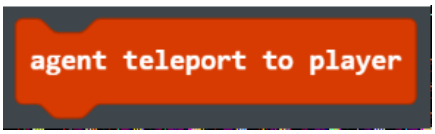
2. Now visit the AGENT drawer on the left-hand menu.

The AGENT drawer offers players a series of code blocks that relate directly to the Agent. The Agent is an assistant who helps you do things in Minecraft. It's a separate in-game but Non-Player Character (NPC) that can be controlled by you.

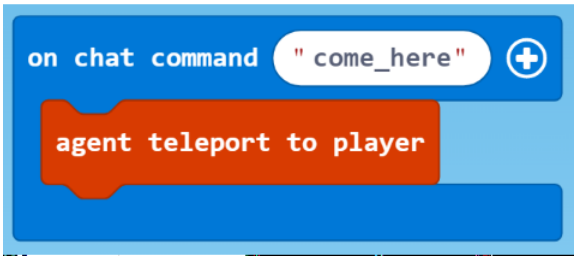
Many of the lessons require you to command the Agent to complete tasks.

The Agent appears when you teleport it to your player.

3. Drag and drop the agent teleport to player code block to the main coding window. Remember it will look opaque until you attach it to something.



4. Drag and drop the agent teleport to player into the on chat command block.



5. Now test your code. In the game, press **T** to open the chat function. Type **come_here** and watch your Agent appear at your exact location. You can move your player back a few steps or look down to see it.

You can do this anytime you need to bring the Agent to a given starting point to create another movement or action.

6. Move your player away from your Agent and test the **come_here** command to watch your Agent disappear and reappear at your exact location. Do this a few times to get the feel for it.

Wrap-up: What I learned

What is an algorithm?

What is block coding?

What is Java script?

What is a string or syntax and what you learned about it in this lesson?

Take a picture of all your code and paste it here.

Take a picture of your agent and paste it here.