Creative Solutions for Creative Minds!

VRWARE® Edu School

a guidebook for leading teachers

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VRWARE Edu School

CHAPTER 1

Introduction to VR

VRWARE Edu School

VRWARE Edu School

- VRWARE Edu School is a VR making solution that lets users create and design their own VR Map and explore them through HMD's or cardboard HMD's.

- Make your imagination a reality! VRWARE is packed with essential tools and 3D objects resulting to a much easier and enjoyable map creation. It also include ready to explore VR Maps such as: outer space, snowy town, farmland, and more!

7 Main Features

Block Coding

7 Main Features

Connection to Smart Tools

Map Exploration

Metaverse space

Interactive Activities
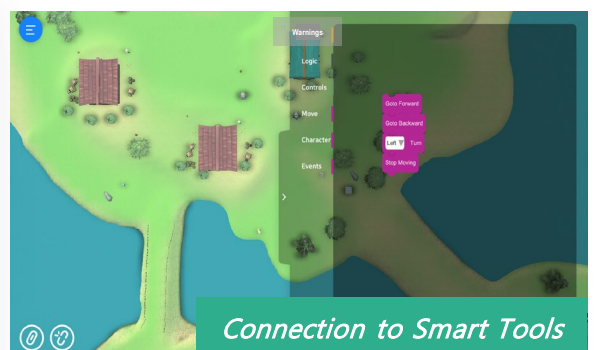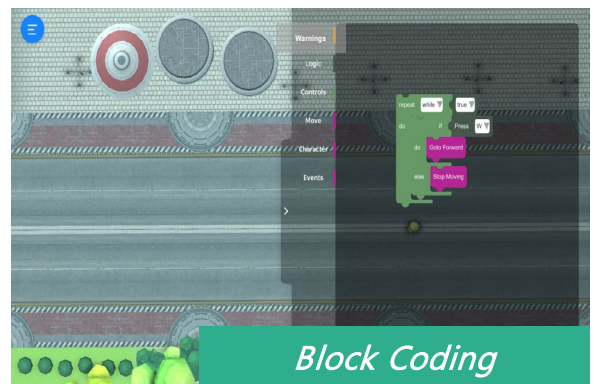
Helpful Tools to Enjoy VRWARE Edu School

VRWARE Edu School Cardboard

VRWARE Edu School Introduction

1.1 Sign-Up

1. Sign-Up
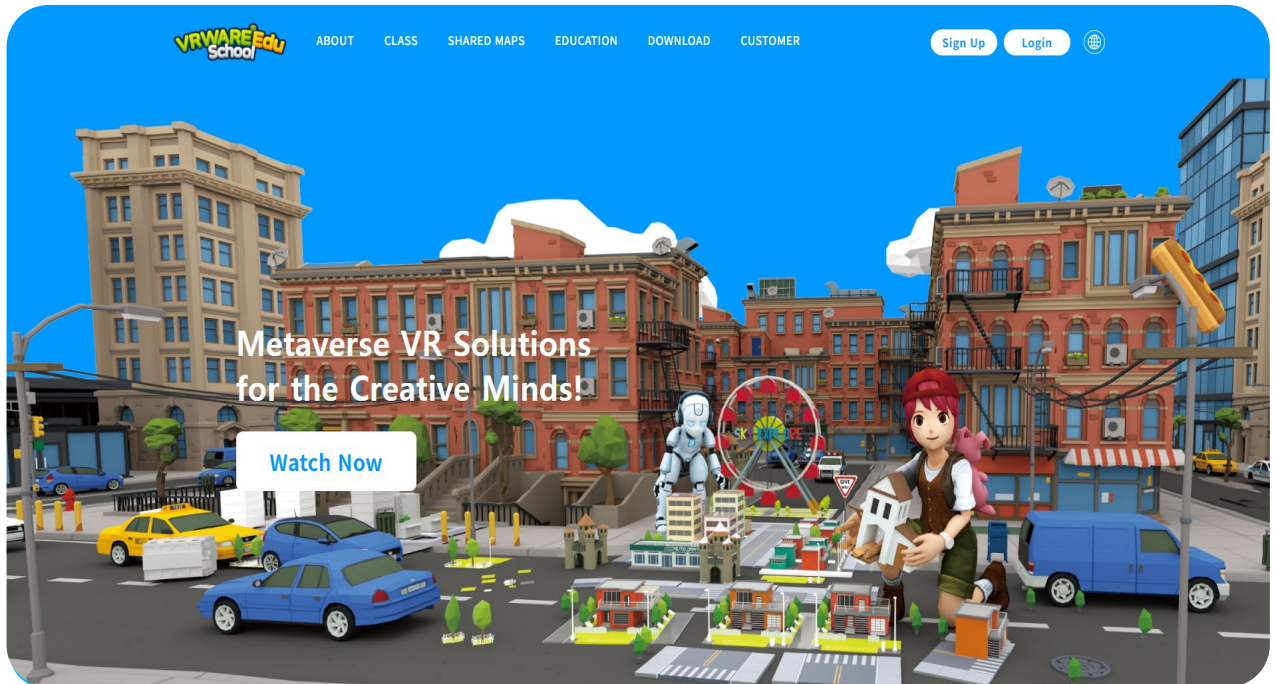
Go to (http://school.vrware.us/) on the upper right-hand side of the main page, click the button to sign-up.

2. Log-In

After providing all the details on the sign-up page, log-in with your password and ID.

1.2 Install and Run Program

Hardware	Minimum	Recommended
Processor (CPU)	Intel® Core™ i3 or AMD Phenom™ X3 8650	Intel® Core™ i5 or AMD Phenom™ Ⅱ X3 or higher
Memory (RAM)	4 GB RAM	6 GB RAM
Graphic Card (VGA)	NVIDIA® GeForce® GTX 460, ATI Radeon™ HD 4850, or Intel® HD Graphics 4400	NVIDIA® GeForce® GTX 660 or AMD Radeon™ HD 7950 or higher
Hard Disk (HDD)	30 GB Free Memory Space	
Operating System	Windows® 7 / Windows® 8 / Windows® 10 64-bit	
Other Requirement: Internet Connection		

Reminder:
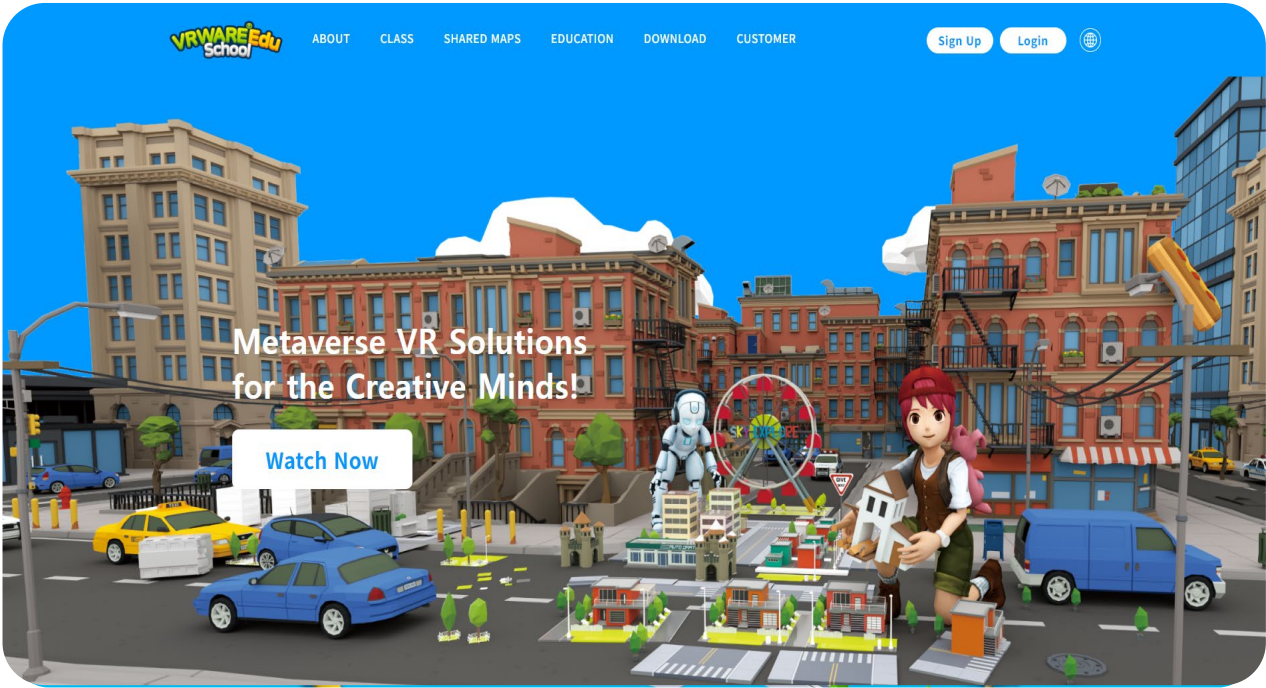
1. Log-In

After signing-up, use your ID and password to log-in.

VRWARE Edu School Introduction
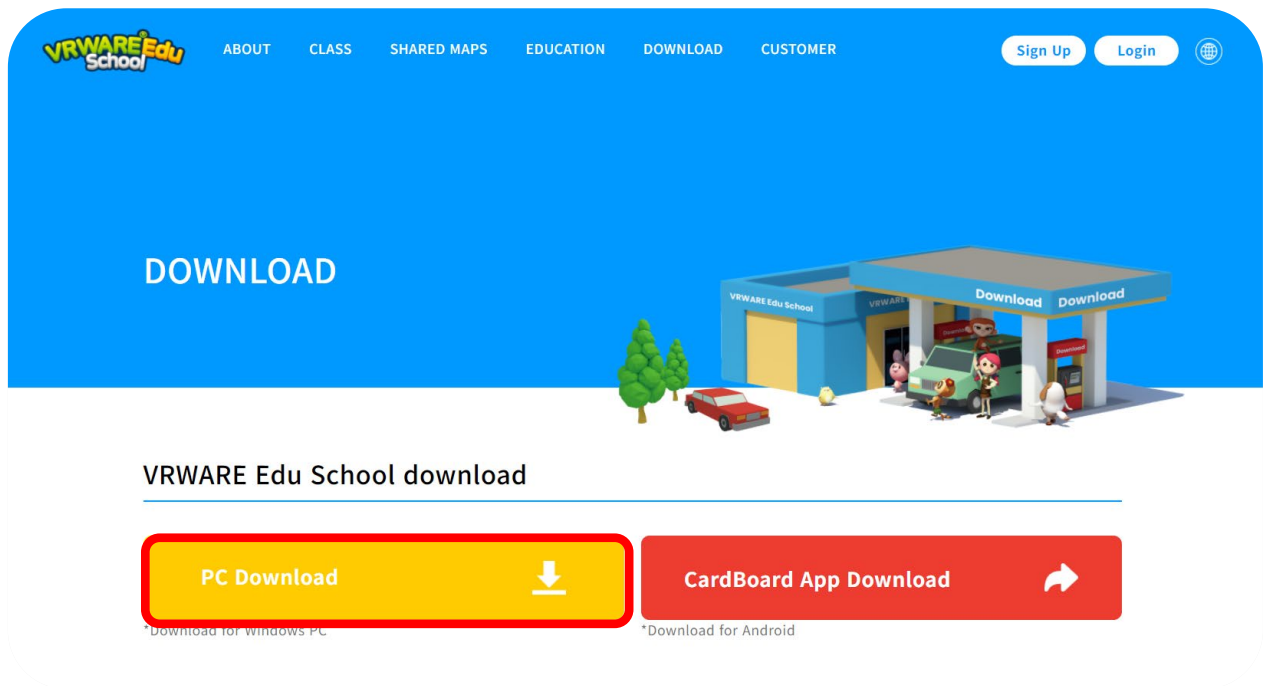
2. Download

Click the yellow button to download VRWARE Edu School file.

3. Save File

Save the file into your folder.

4. Run the Program

After downloading the file, click the installer to run the program.

VRWARE Edu School Introduction

1.2.1 Run the Program

> **1. Follow the steps below to install VRWARE Edu School.**

File Download →
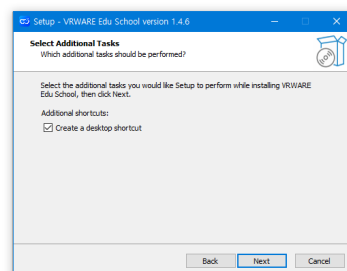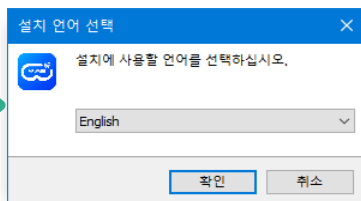
Select Language

Check Agreement
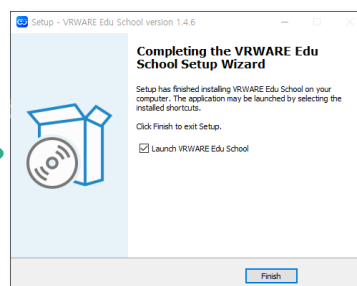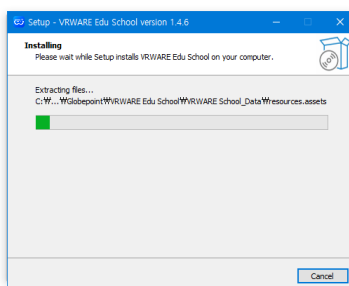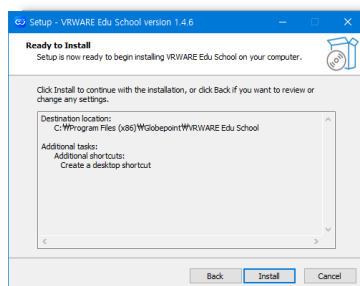
Preparation for Installation →

Program Installed →

Installation Completed

Open the Program

1.3 Log-In

1. ID (e-mail) / Password

Enter your ID and password to log-in

2. Log-In

After providing your ID and password, click the log-in button.

3. Sign-up

If the ID and password provided are not working, you can sign-up again.

4. Find Password

Find password page will be shown.

1.4 Configuration Settings
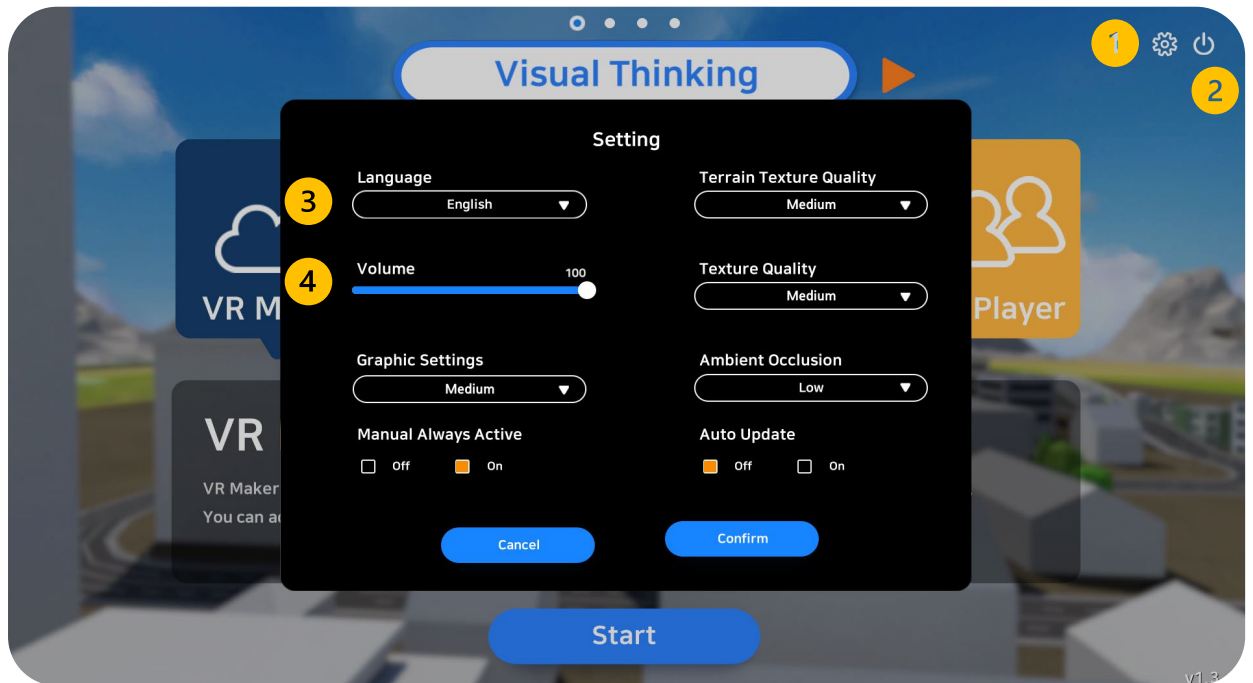
1. Options

Settings / Configuration Settings page will be shown.

2. Power Button

Close the program.

3. Language

Available in 5 different languages (English, Korean, Japanese, Vietnamese, & Chinese)

4. Volume

Set the background music's volume.

VRWARE Edu School Introduction
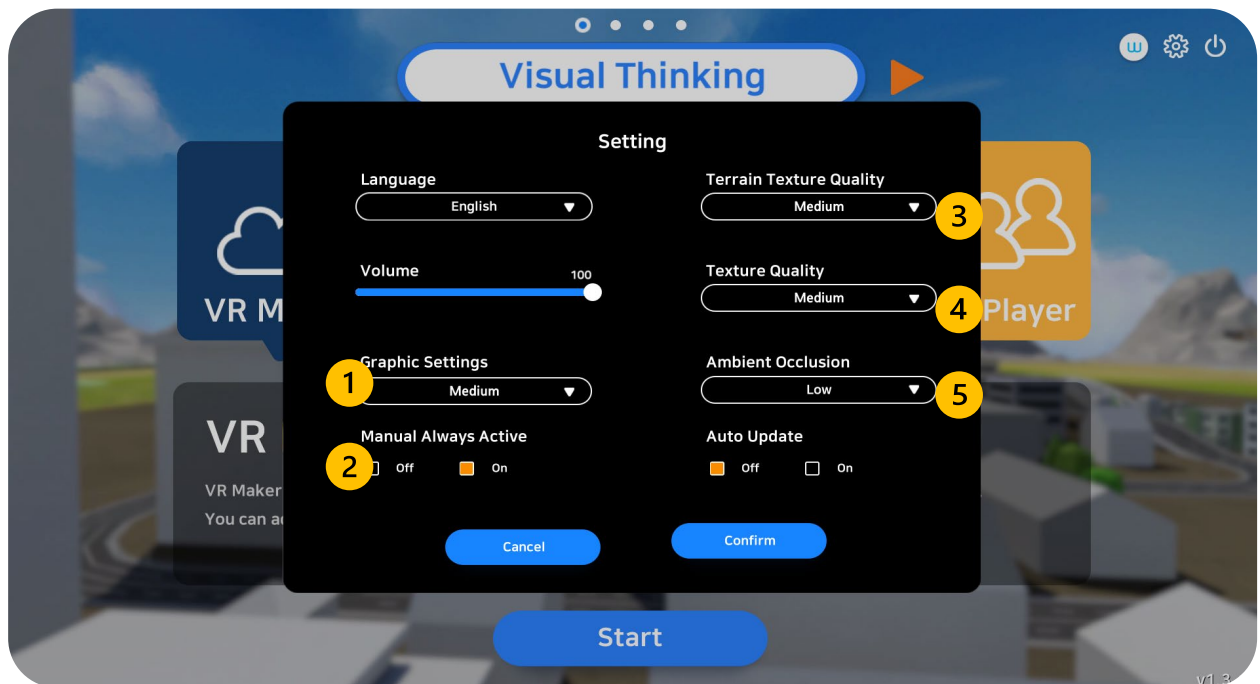
1. Graphic Settings

Set the graphics according to the computer's specification
(Options: low spec and high spec). You can also customize the texture quality.

2. View Manual Option

Set the option to always view the manual.

3. Image Quality

Customize the image quality of the screen (Options: low spec, high spec)

4. Texture Quality

Customize the texture quality of the 3D objects (Options: low spec, high spec)

5. Ambient Occlusion

Customize the settings for ambient occlusion for a more realistic background.

1.5 Main Menu

1. VR Maker

Let's users create and design their own VR map.

2. VR Player

Let's users explore their designed VR map through cardboard HMD's or HMD's.

3. VR HMD

Tools used to explore the designed VR Map. HMD or Head Mounted Display such as VRWARE Cardboard, Mirage Solo, DPVR, etc.

4. Meta Player

Maximum of 30 users can explore a certain VR map.

VRWARE Edu School Introduction

1. 3D Object

Create your own 3D object and add it to the VR Map. The software allows connection to MS Print.

2. 3D Builder

3D builder provide wide selection of tools to help create a 3D Object

3. 3D Viewer

Bring-up 3D models created in the 3D builder.

4. 3D Download

Allows users to download some 3D images inside the software.

VRWARE Edu School Introduction
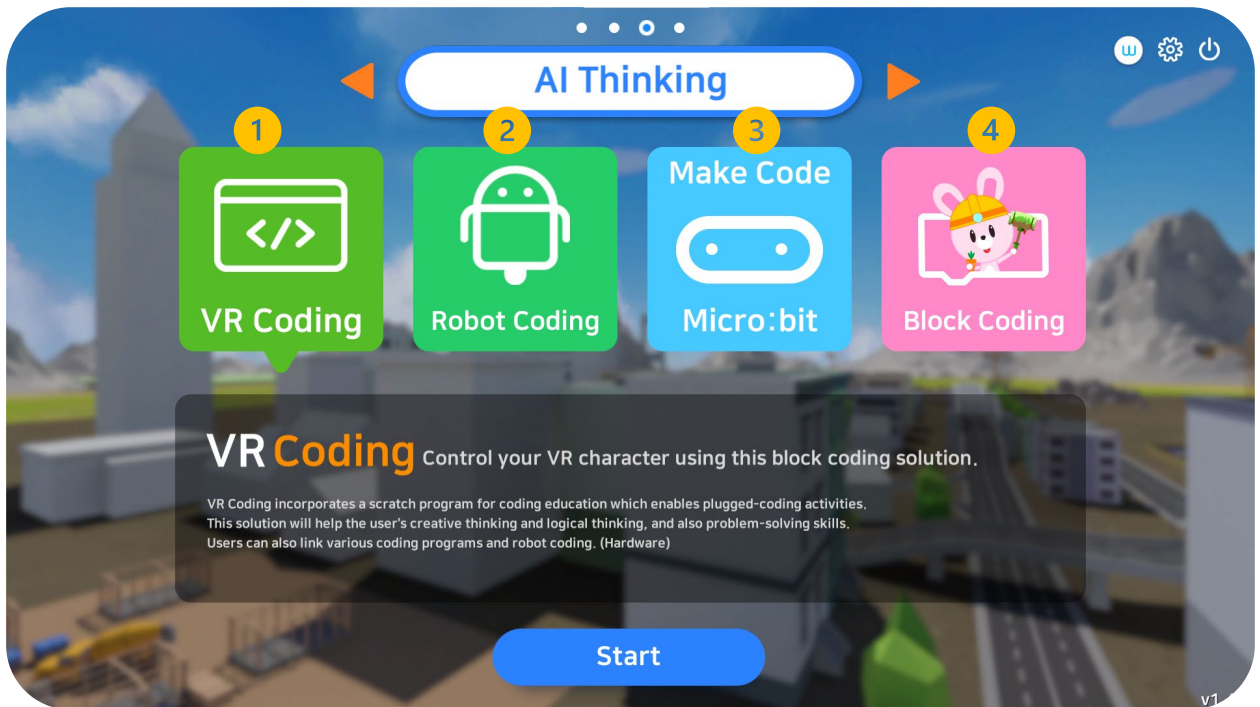
1. VR Coding

Enables coding activities in a 3D virtual environment. VR coding enhances user's creative thinking and logical thinking skills.

2. Robot Coding

Control robot's movement by connecting it to VRWARE Edu School.

3. Micro:bit

Create codes for micro:bit using block codes in VRWARE Edu School.

4. Block Coding

Let's play a game of whack-a-mole based on block coding together.

VRWARE Edu School

CHAPTER 2

Map Design / Creation

VRWARE Edu School Map Design / Creation
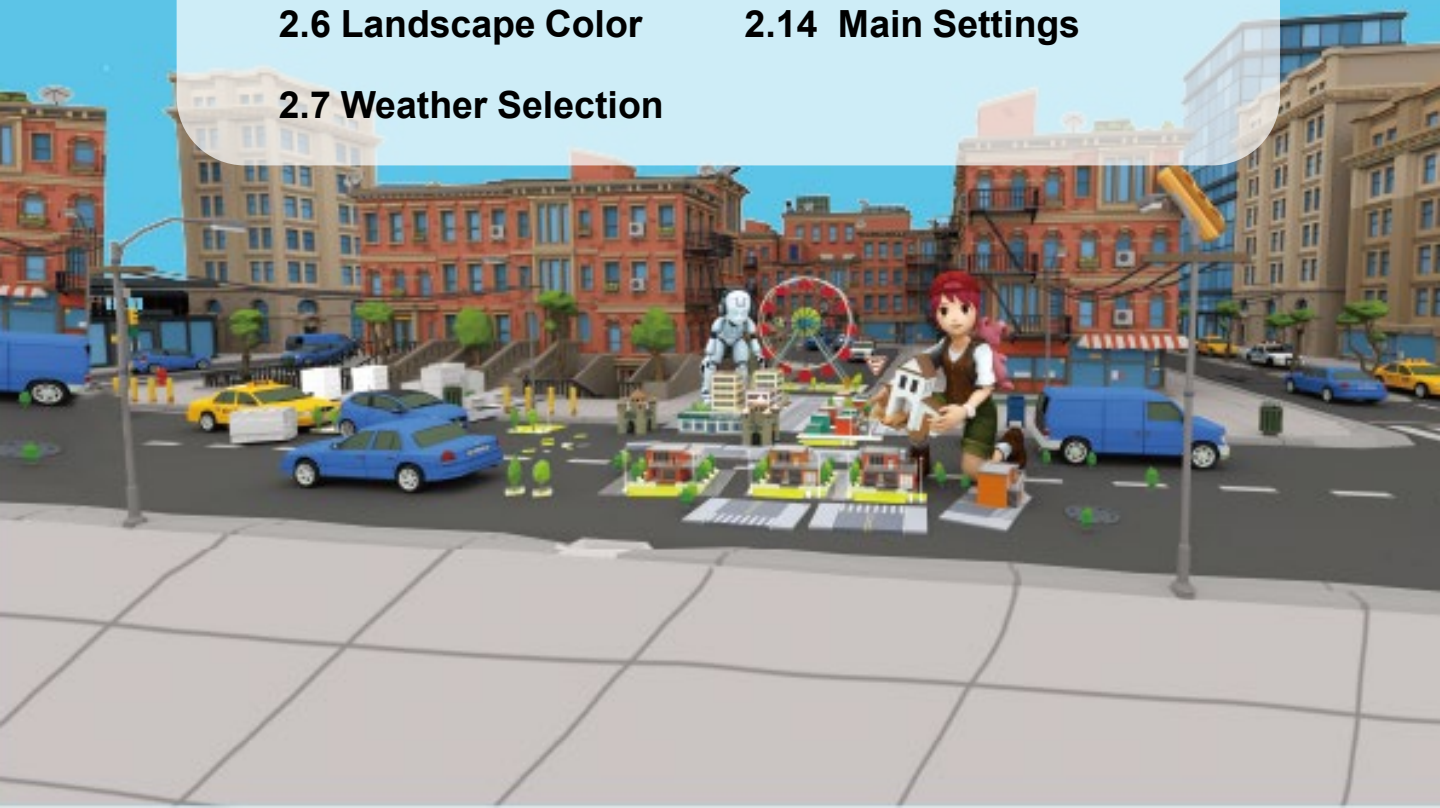
2.1 Map Selection
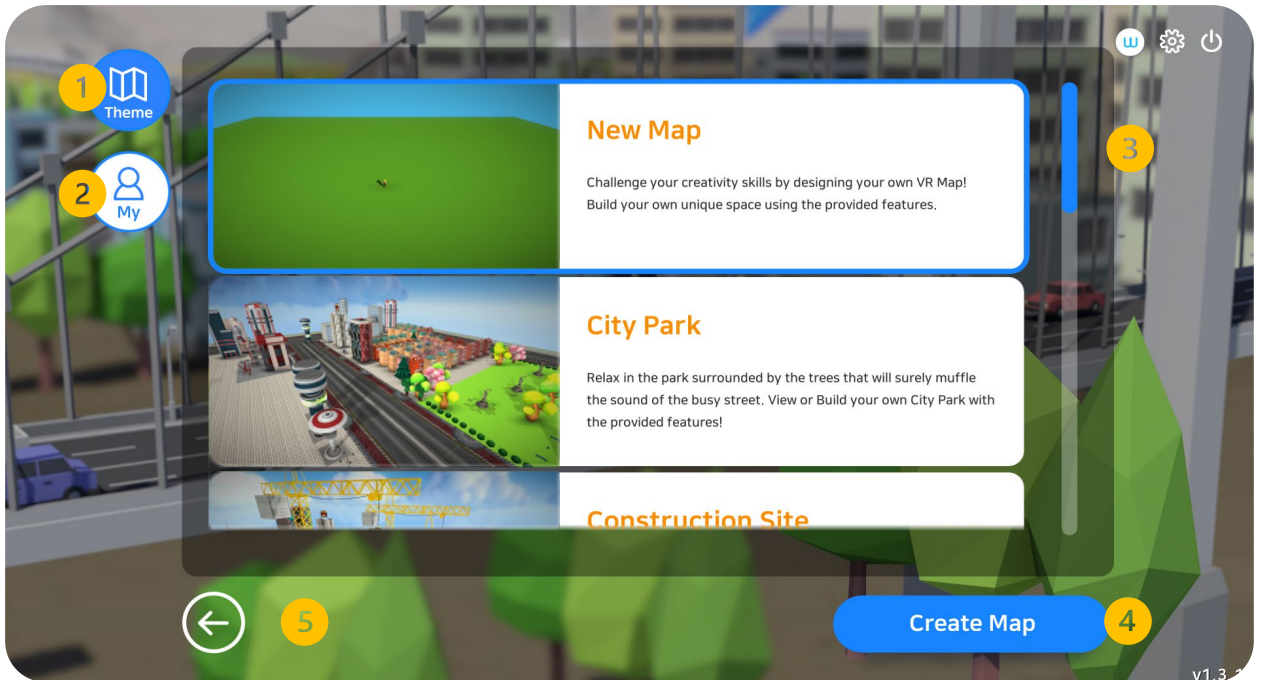
1. Theme Maps (Total of 12)

There are a total of 12 ready-to-explore map themes in the VRWARE software. User's can also edit those themes, add objects and save it as a new map.

2. My Map

My map page shows the user's designed VR Maps.

3. Select Map

Create a new VR map by selecting this window.

4. Create Map

Click create map button to start.

5. Go Back

Click go back button to view the main page.

2.2 Main Features
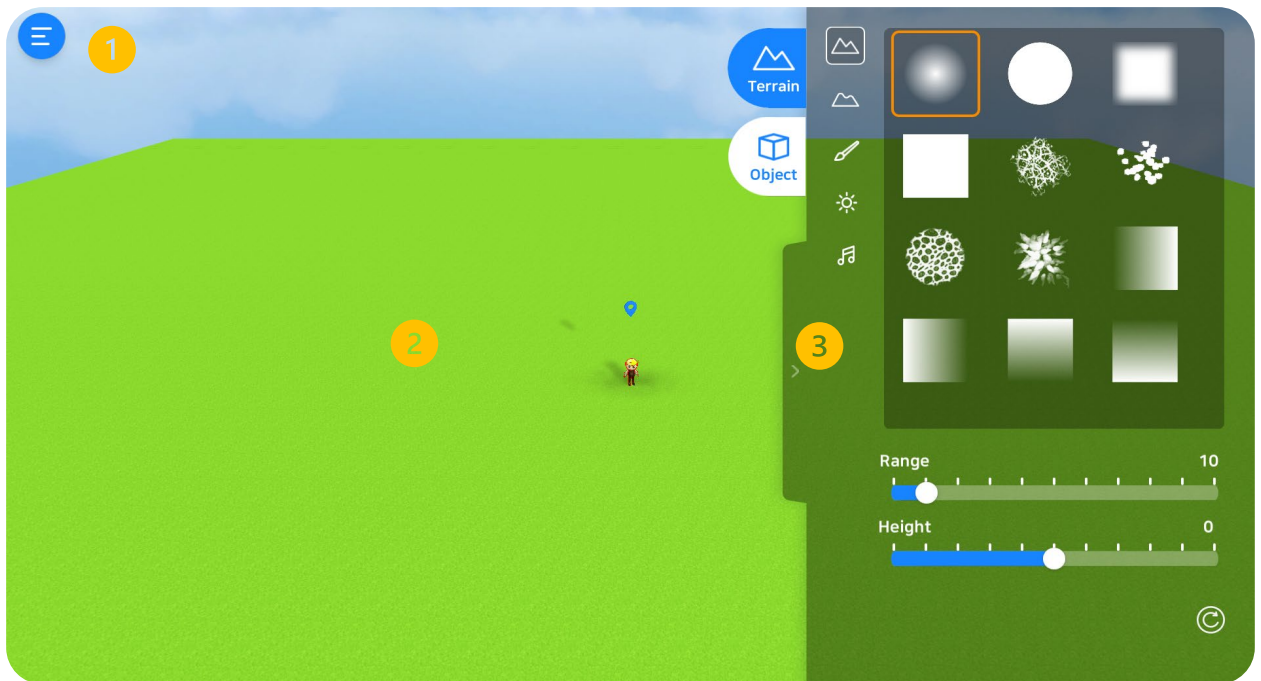
1. Menu

Menu options include, save map, map preview, go back, and other settings.

2. Main Map

User's will use the main map to design and create VR Maps.

3. Map Tools

Landscapes, 3D characters, 3D Objects are just some of the features that VRWARE can offer.

2.3 Key Instructions
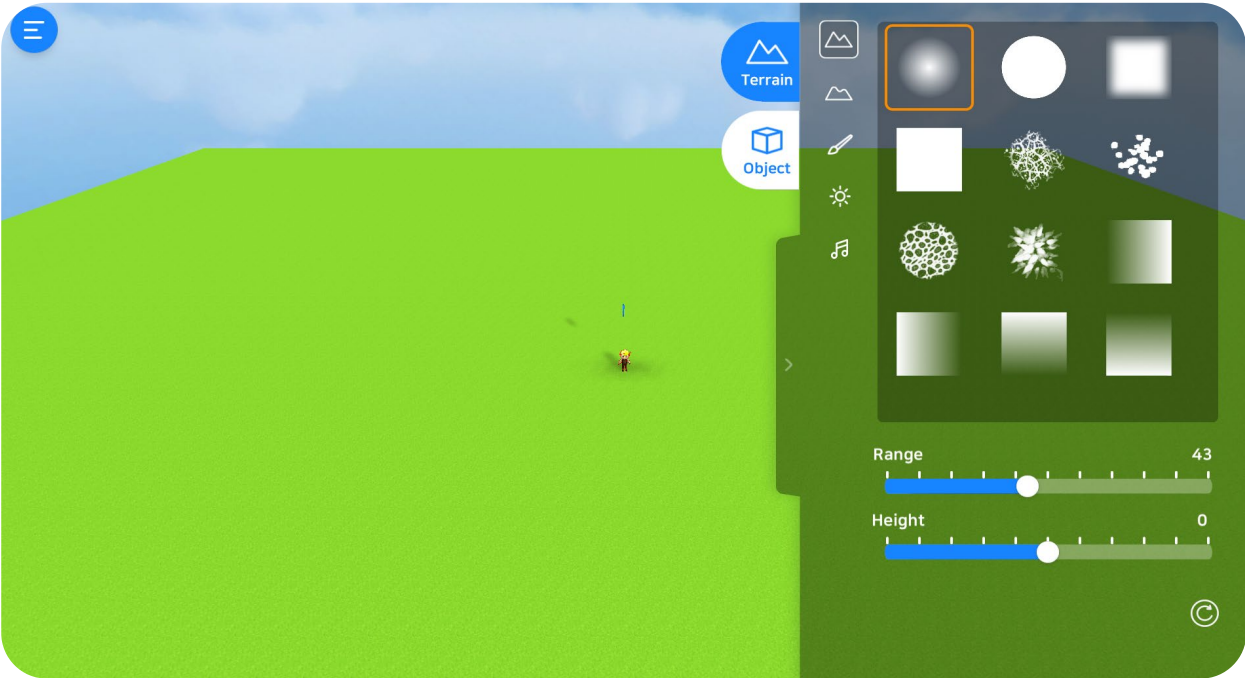
Keyboard Instructions

Map point-of-view directions:

Zoom-in

↑

Left ← ↓ → Right

Zoom-out

Zoom-in

Bird's eye view | Q | W | E | Aerial view

Left | A | S | D | Right

Zoom-out
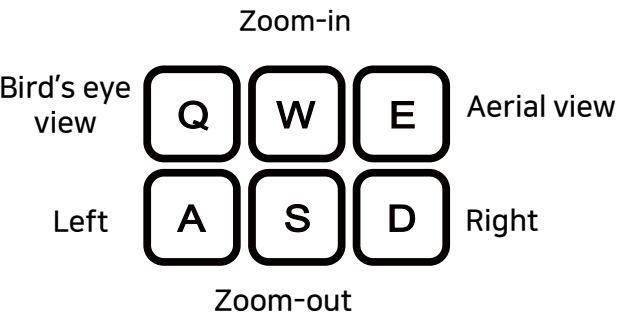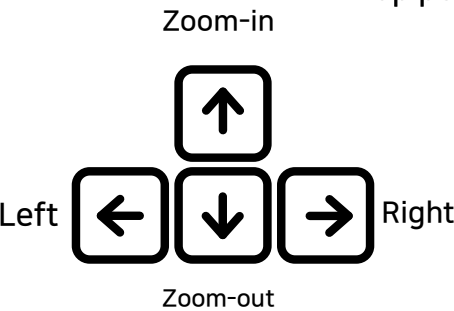
Mouse Instructions

Mouse clicks:

Select Object
Change Landscape
Delete Object

Change
Point-of-view
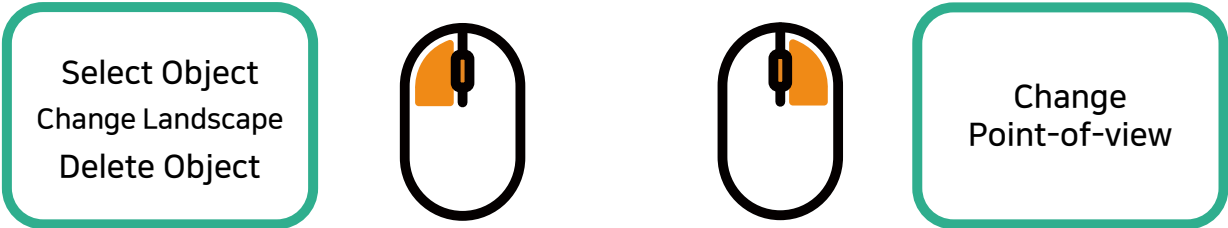
2.4 Change Landscapes
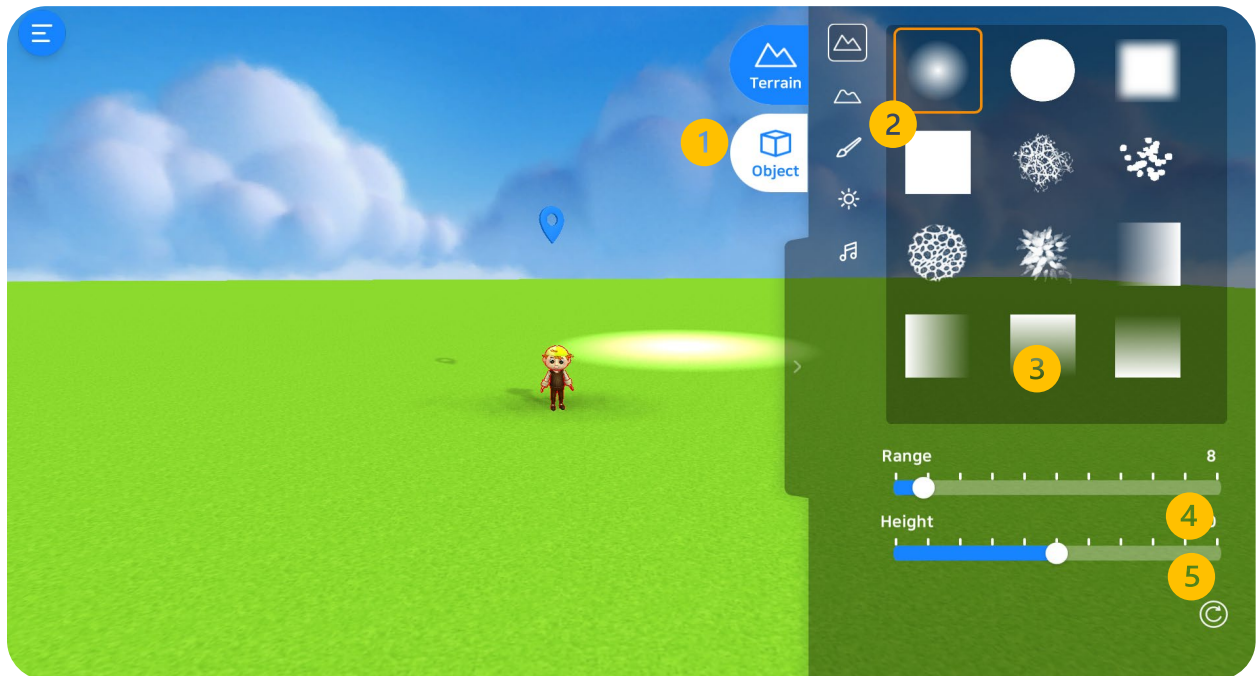
1. Landscapes

Customize map's landscapes using the tools provided inside the software.

2. Height

Change the landscape by toggling the slide bar. Negative numbers create bodies of water while positive numbers produce hills or mountains.

3. Brush Tools

Select various types of brushes to design the landscape in the map.

4. Range

This option is to help users control the range of landscape that are needed to be designed. The higher the number, the larger the range.

5. Height

Lowest: -100 ; Normal Height: 0 ; Highest: 100

VRWARE Edu School Map Design / Creation
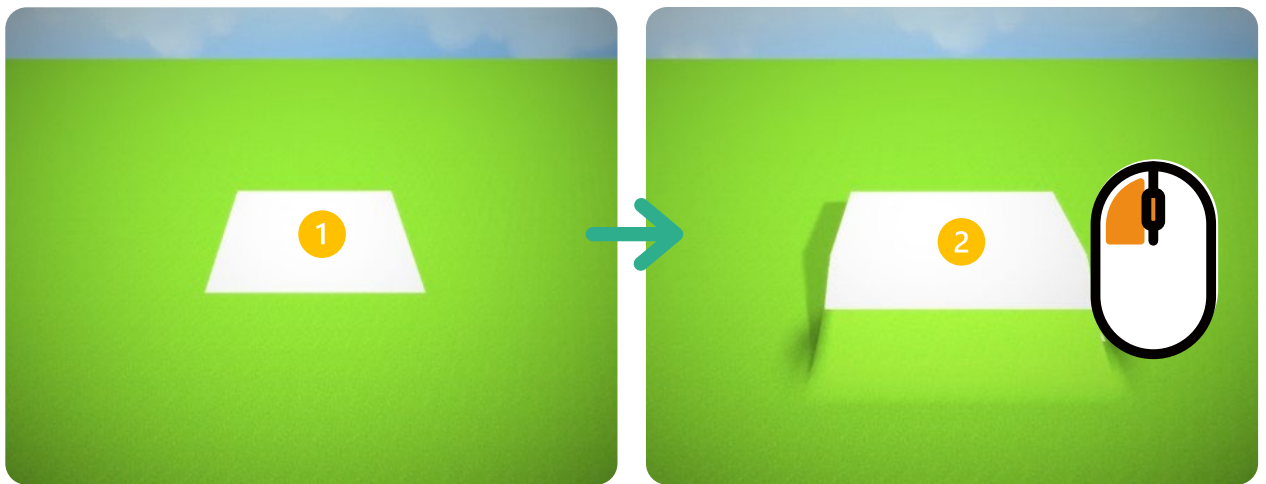
1. Move Location

Move the designated object to another location by using the mouse.

2. Mouse Click

the landscape will change according to the shape of the selected brush type.

2.4.1 Brush Tools
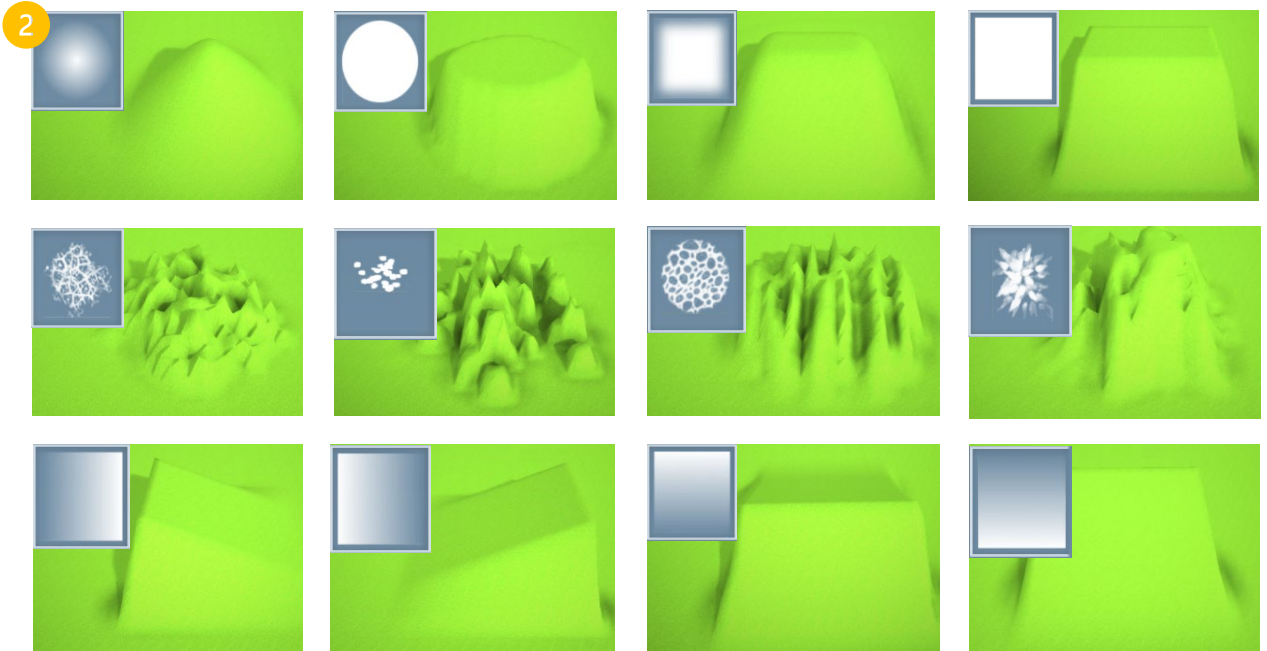
1. Brush Tools Selection

Select any brush types according to your preference.
Scroll the mouse to view and select more brush types.
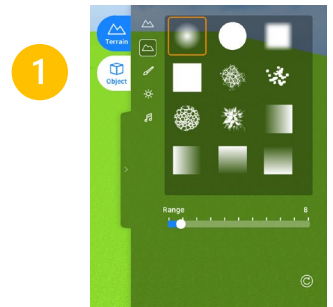
2. Brush Types

Every brush tools gives different landscapes textures.

2.4.2 Range
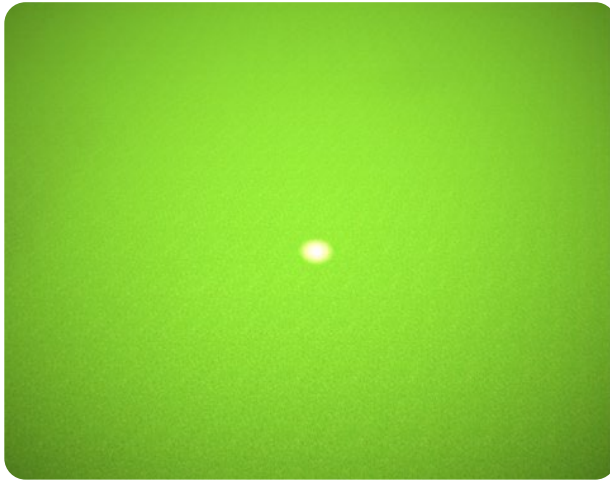
Range : 1
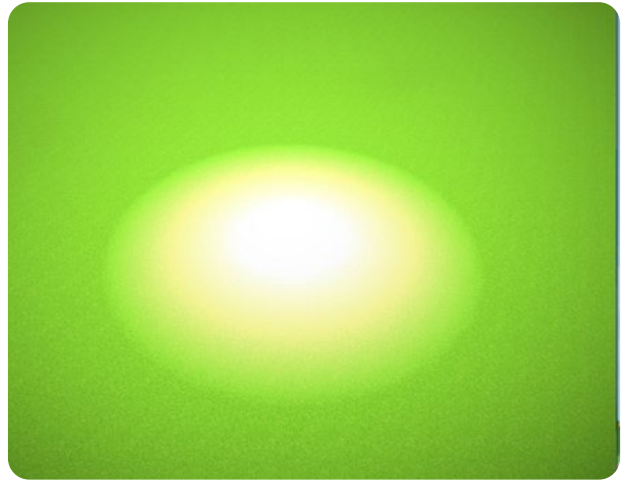
Range : 10

1. Scale of Range Selection

Adjust the range slider according to your preference.
(Minimum: 0, Maximum,: 100
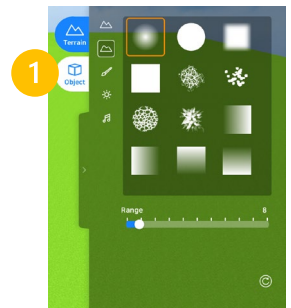
Reminder:

For more detailed landscapes, use a smaller range size. The higher the number of adjustments on the slider, the wider the range.

2.4.3 Height
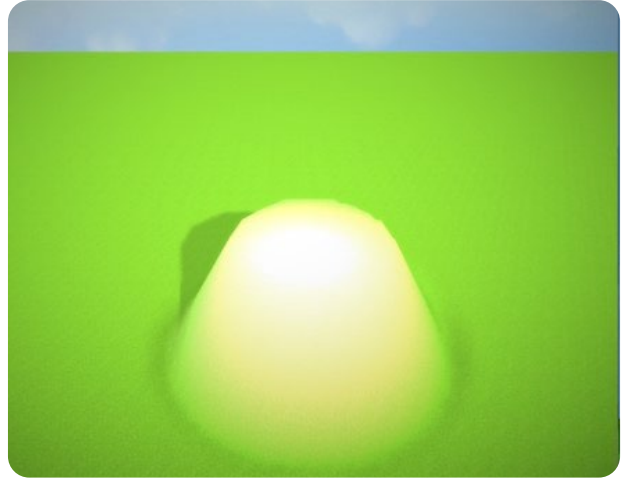
Height : -60 **Height : 60**

1. Height

Adjust the height slider according to your preference.
(Minimum: -100, Average: 0, Maximum: 100)
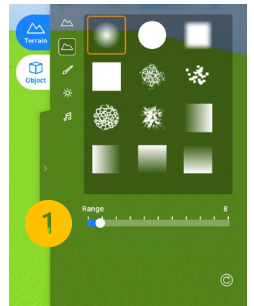
Mountains

Adjust the height slider higher than the average height to create mountains.

Bodies of Water

Adjust the height slider below -60 to create bodies of water.

Reminder:

If sliders are adjusted below -54, characters, 3D objects, and other interactive activities cannot be added. Make sure to adjust the slider to average height.

2.5 Smooth/Rough Surfaces

1. Landscapes

Smooth out rough landscape surfaces by using other brush tools.
Smooth surfaces are also an advantage when exploring the map.

2. Brush

Select brushes according to the landscapes you want to create.

3. Rough Surfaces

Since they are rough terrains, exploration will be challenge.

4. Smooth Surfaces

Creating smooth surfaces will result in providing a stability for map exploration.

5. Landscape Range

Adjust the landscape range according to your preference.
(Minimum: 0, Maximum: 100)

VRWARE Edu School Map Design / Creation
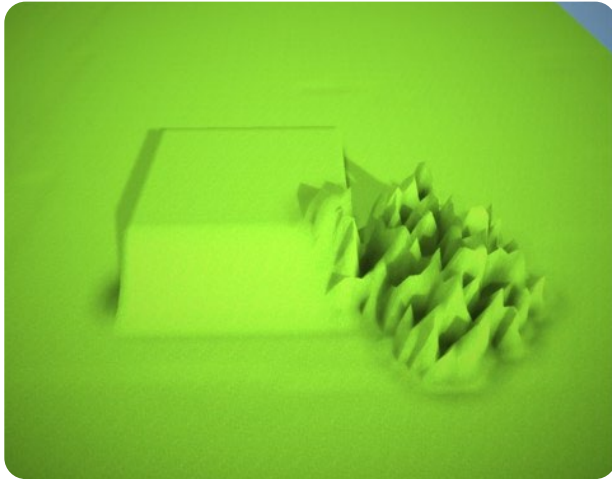
Before
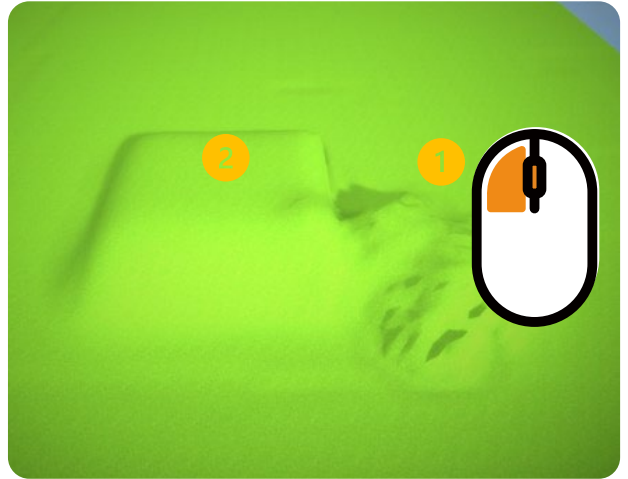
After

1. Mouse Control

Move your mouse cursor onto the surface you want to smooth out.

2. Click

Right click on the mouse to start smoothing out the rough surface.

2.6 Landscape Color

1. Landscape Color

Select different color tools to customize your landscapes.

2. Brushes

Select the brush types according to your preference.

3. Color Tools

Select color brush tools according to your landscape.

4. Coloring

Select the surface you want to color inside the map.

5. Color Range

Adjust the range of coloring slider (Minimum: 0, Maximum: 100)

VRWARE Edu School Map Design / Creation

1. Color Selection (28 colors in total)

Select landscape colors provided.

2. Mouse Control

Move your mouse cursor over the surface you want to color.

3. Coloring

Right click to start coloring.

<Different Types of Landscape Colors (28 Colors)>
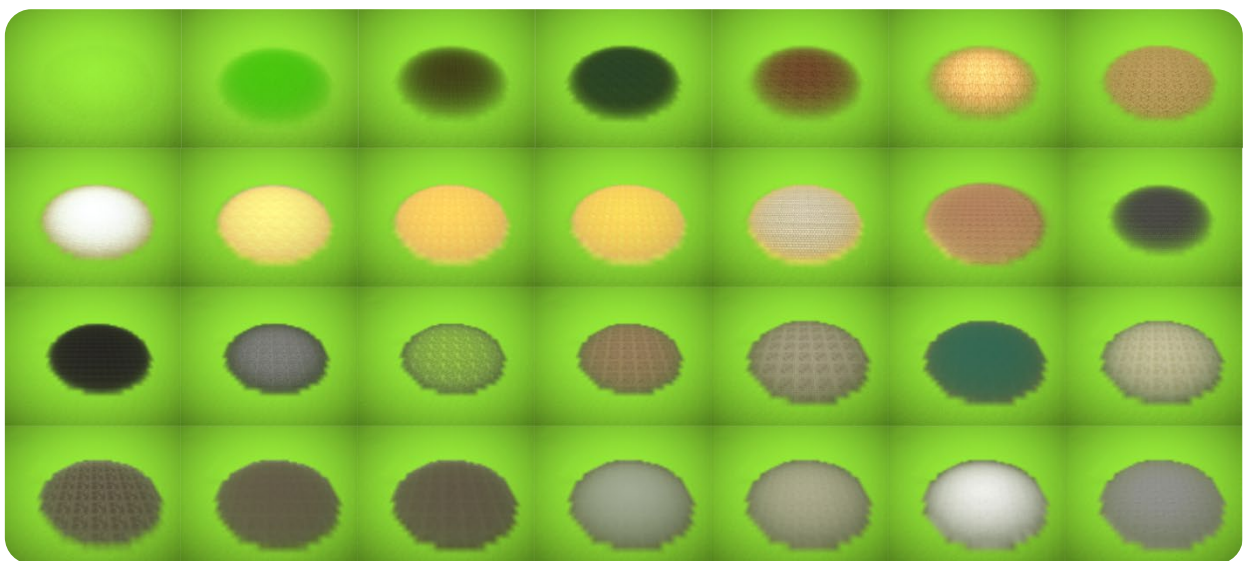
2.7 Weather
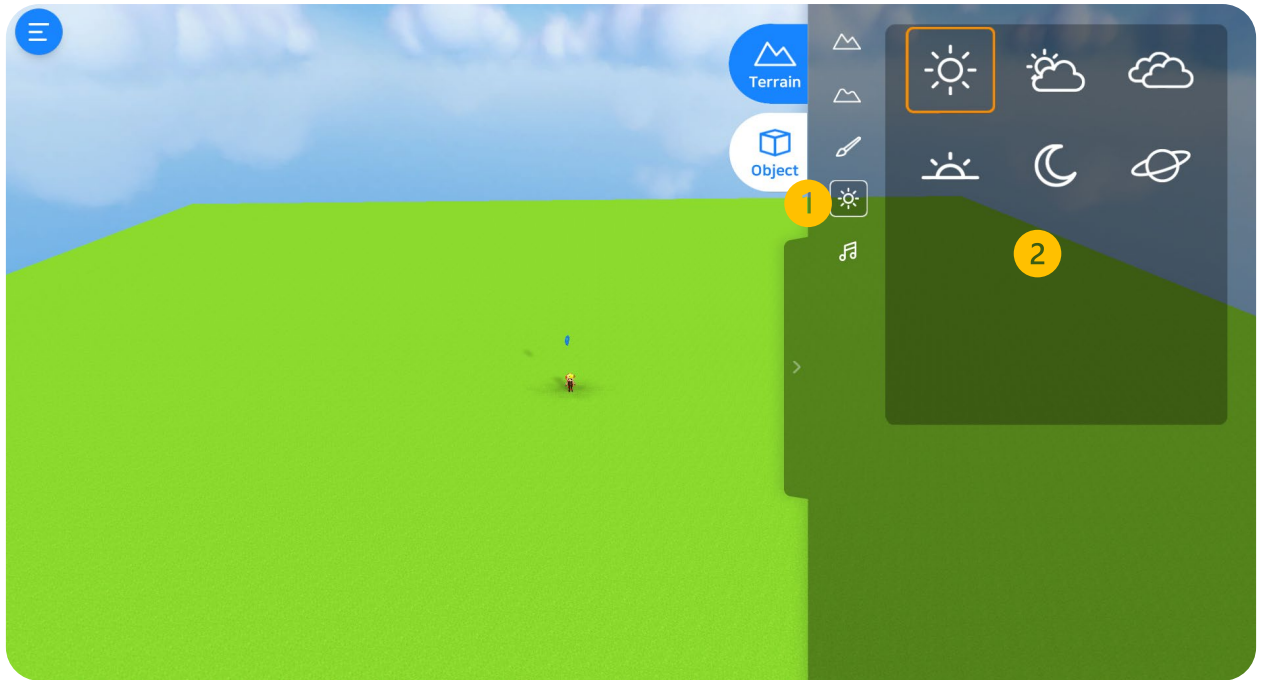
1. Weather

The image shows the default weather for the VR Map. However, different weather selections are also provided. Click the sun logo on the map to check.

2. Weather Selection (6 Total Selection)

Sunny, Cloudy, Rainy, are just some of the weather features. Other features include sunset day, nighttime and starry night.

2.8 Background Music
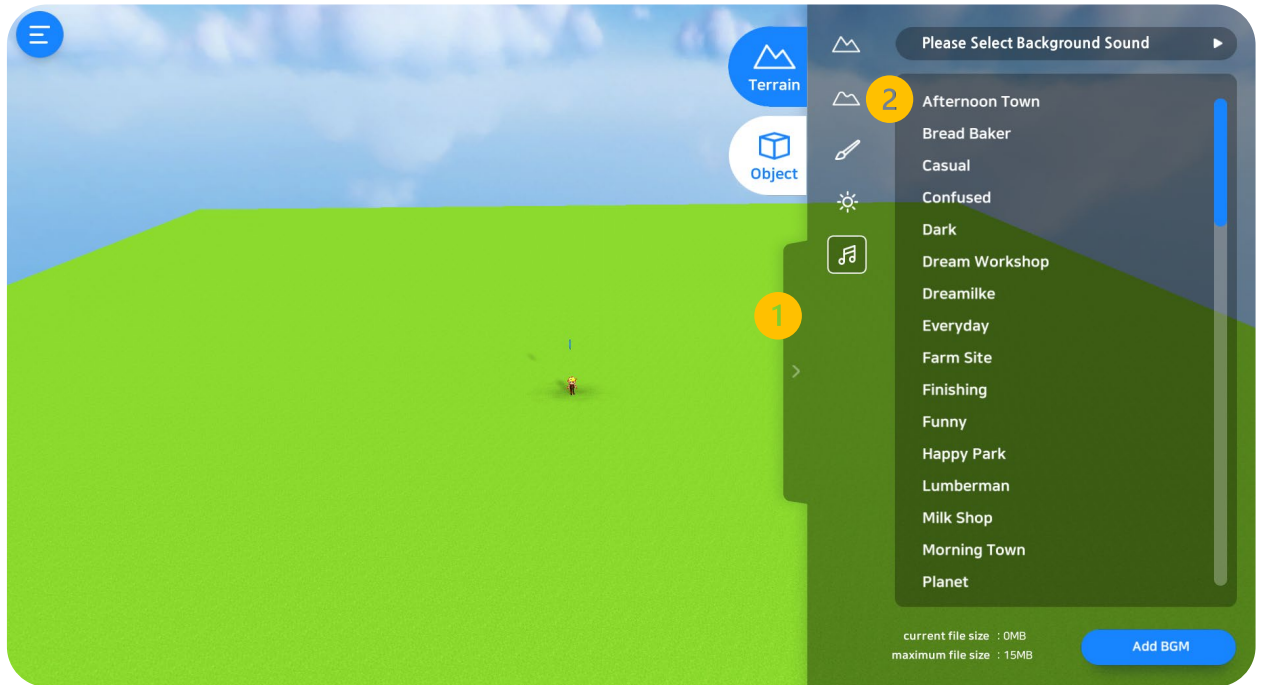
1. Background Music Settings

Several selections of background music are provided. Click on the preferred BGM and it will automatically be activated. To cancel, just click the selected BGM again.

2. BGM Selection (Total of 22 Selections)

There are a total of approximately 22 background selections provided.

VRWARE Edu School Map Design / Creation
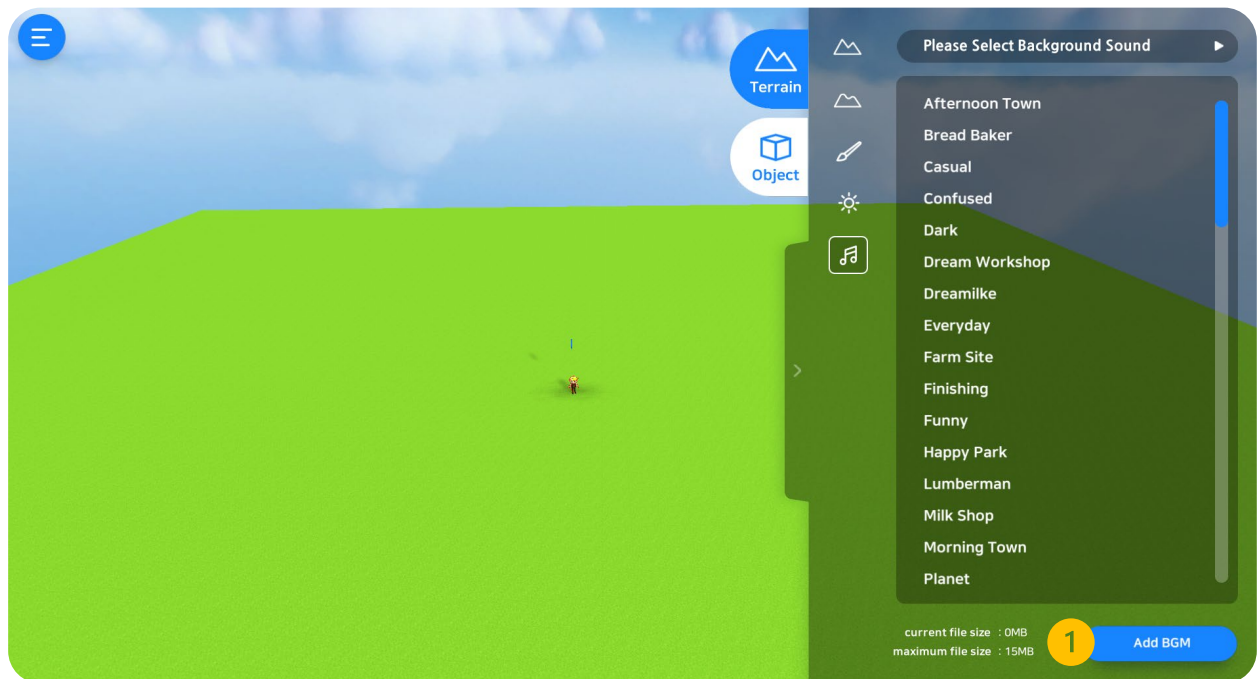
1. Add Background Music

Click the "Add BGM" button as shown in the image to add your preferred background music for your map.

* Available BGM formats: MP3, Wav, and Ogg.

2.9 3D Objects
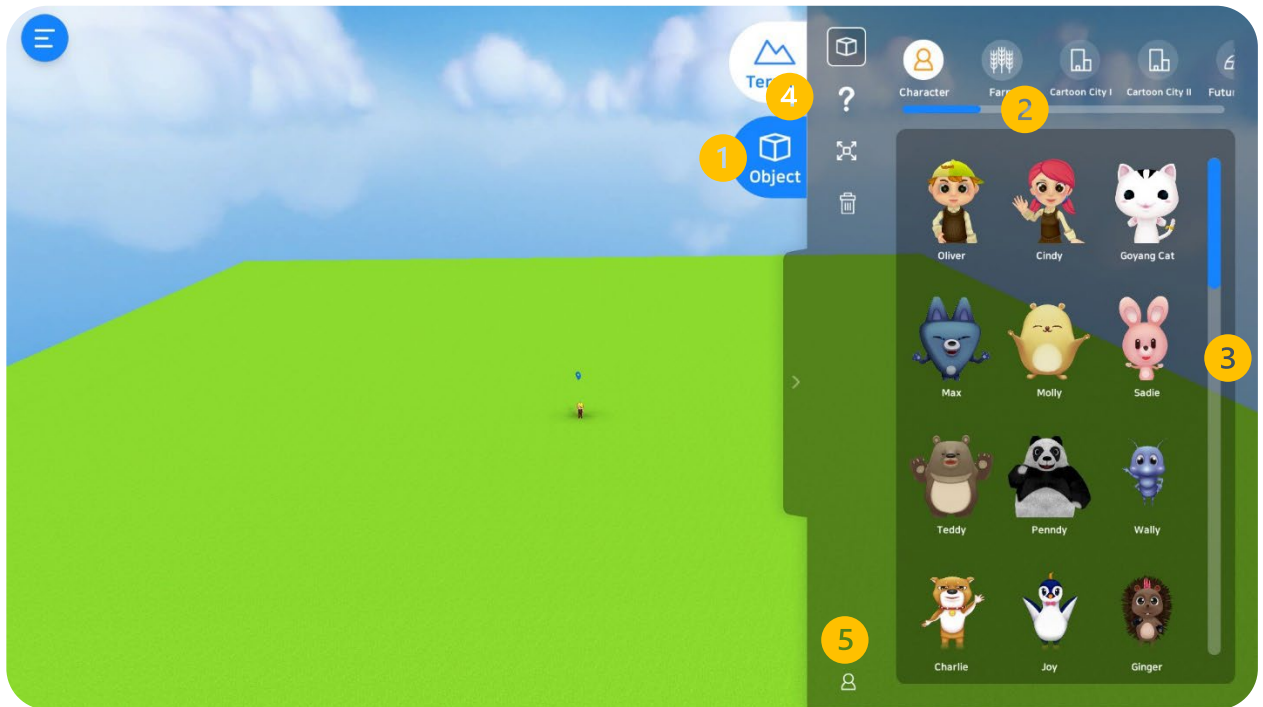
1. 3D Objects

Different types of 3D objects are available: VRWARE Characters, buildings, dinosaurs and a lot more.

2. Category

Several types of object categories are available: cartoon city, characters, landmarks, interactive activities, and more.

3. Objects

Select objects by categories as shown in the image.

4. Event

You can create events with various learning effects.

5. Icons

Show or hide player icon or background music.

2.9.1 Object Selection
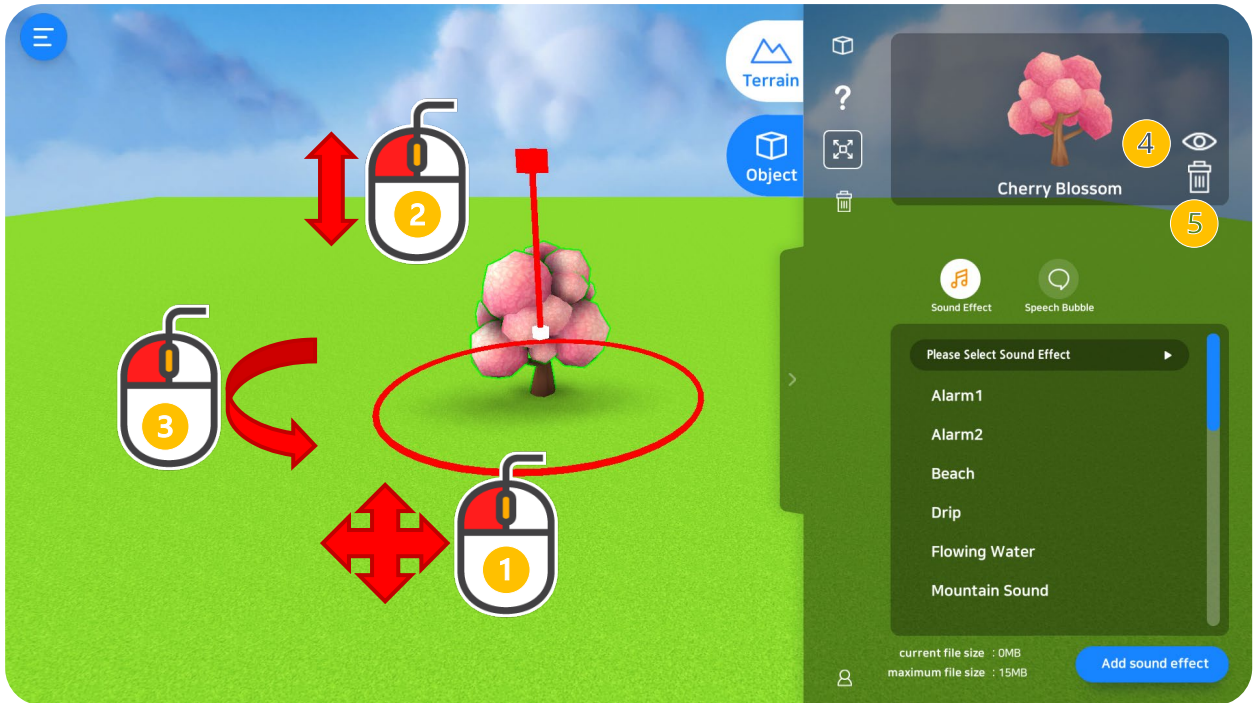
1. Move Object

Move the object from one place to another. Right-click on the mouse and drag the object to your designated place.

2. Object Size

Adjust the size of the object. Right-click on the mouse and scroll upward and downward to adjust the preferred size.

3. Rotate

Rotate the object to show a specific angle. Right-click on the mouse and rotate the object as shown in the image to adjust the object's angle.

4. Object Placing

Select the object you want to move from one place to another.

5. Delete Object

Delete the selected object.

2.9.2 Object Customization

1. Player

Select user player to explore.
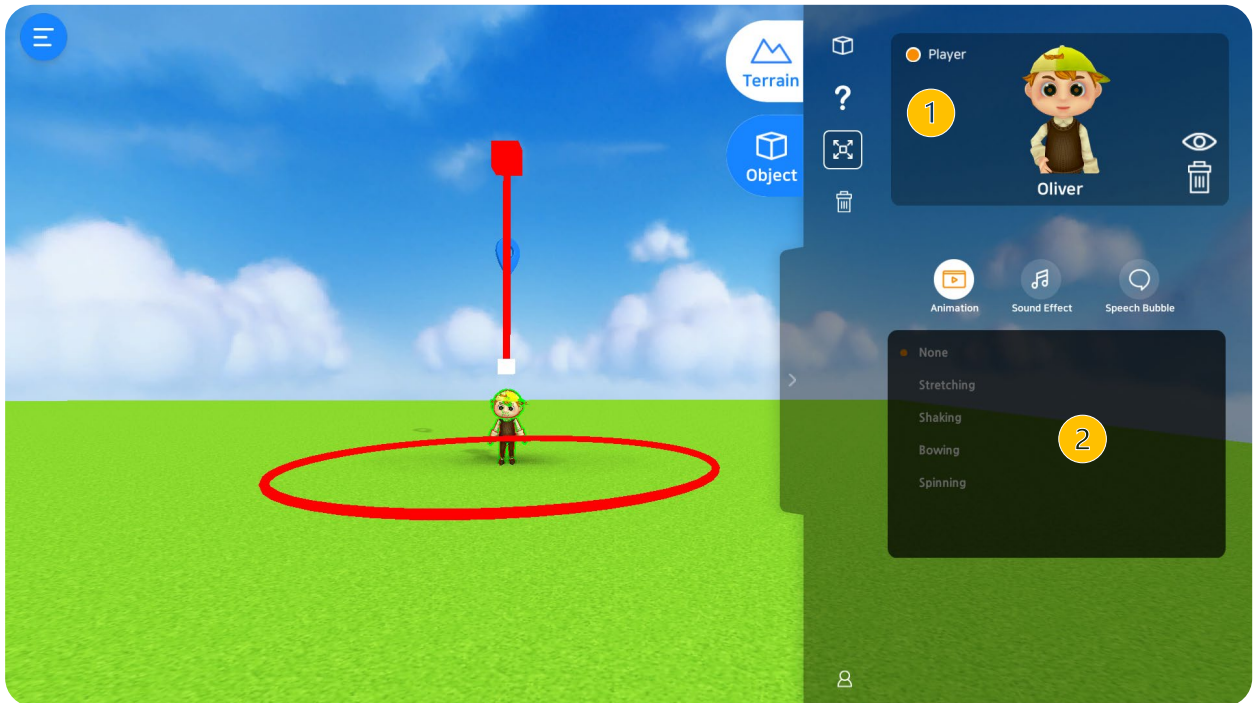
Without selecting players, exploration will not be possible.

You can change your character player while another character player is exploring.

* User players can only be selected from 3D characters, not 3D objects.

* Only one player at a time can explore the VR Map.

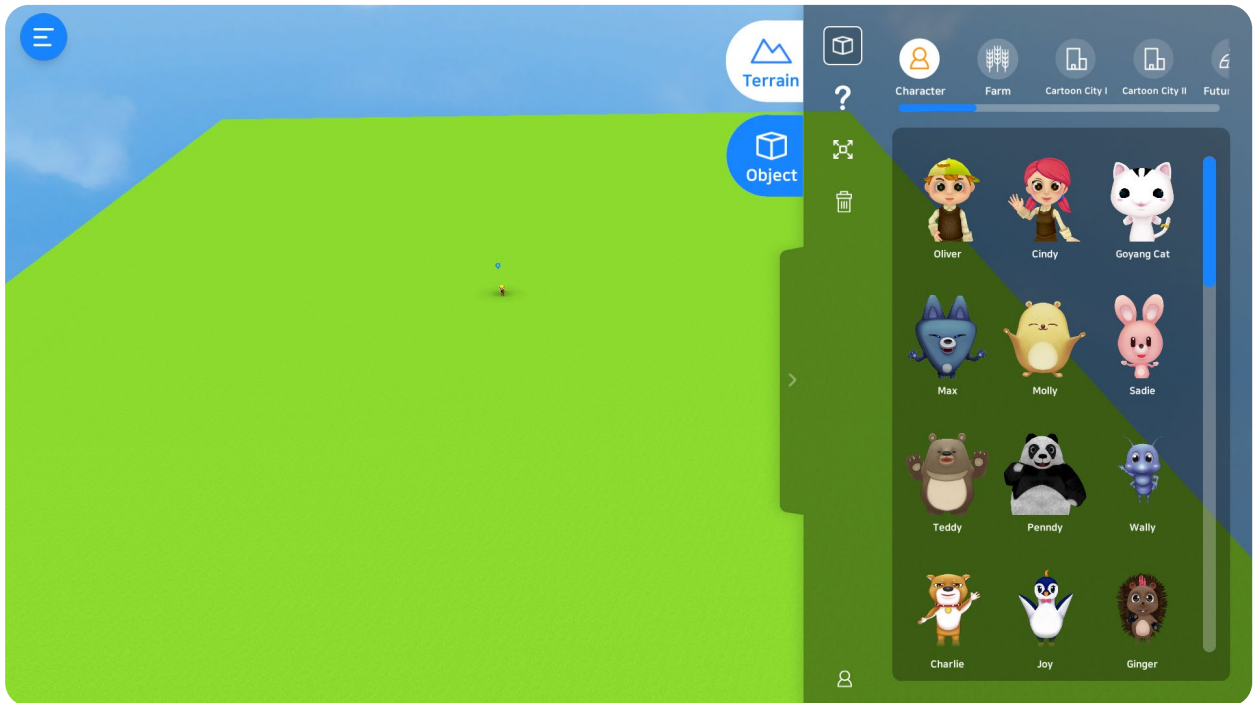## 2. Animations / Character Movements

Customize the character's movements.

① None: Default

② Stretching

③ Shaking

④ Bowing

⑤ Spinning

* Animations are not possible for the user player.

2.9.3 Object Categories

Character

Select customized animations/ movements to map characters.
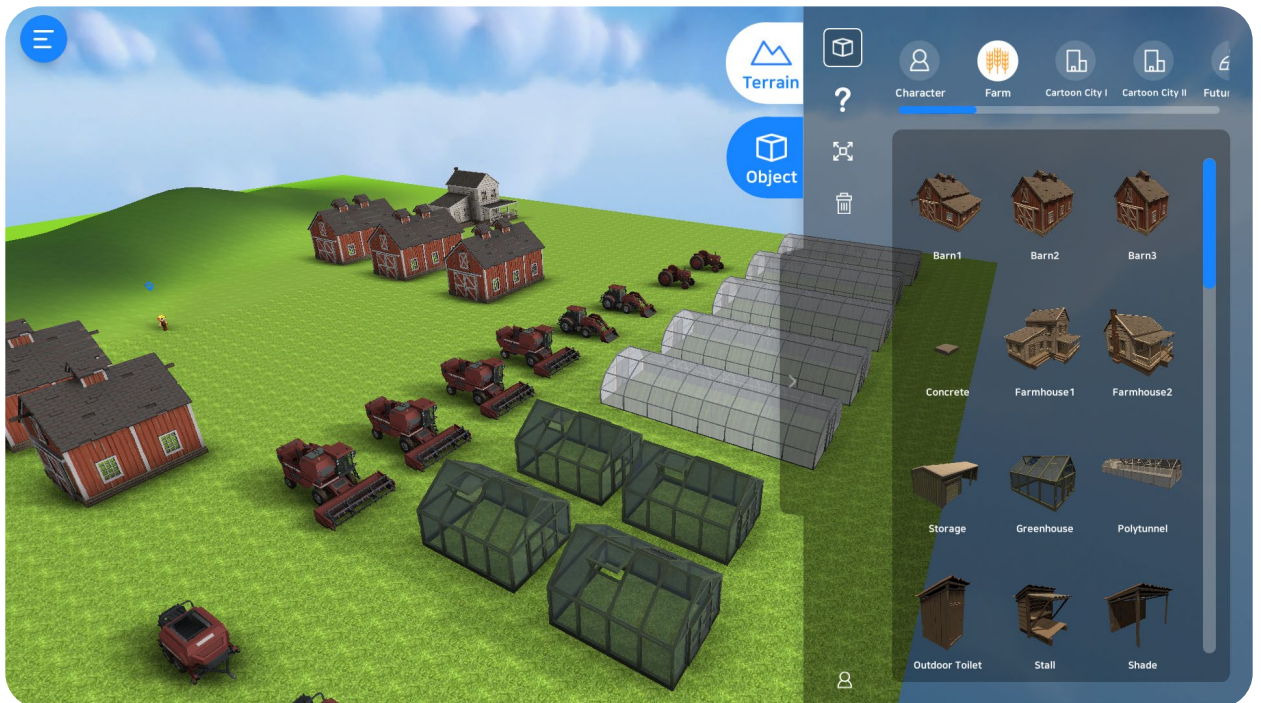
Farm

You can create your own farm with farm-related objects.

VRWARE Edu School Map Design / Creation
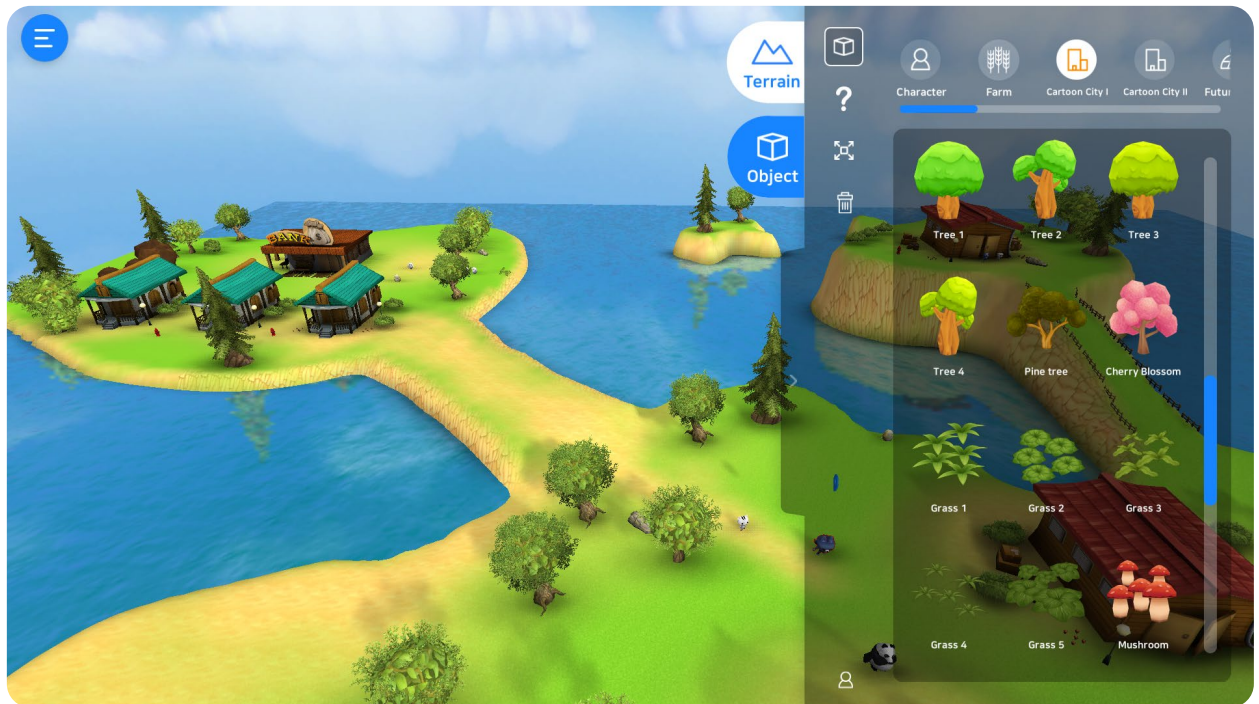
Cartoon City 1

Select objects from the cartoon city category to create your own map.
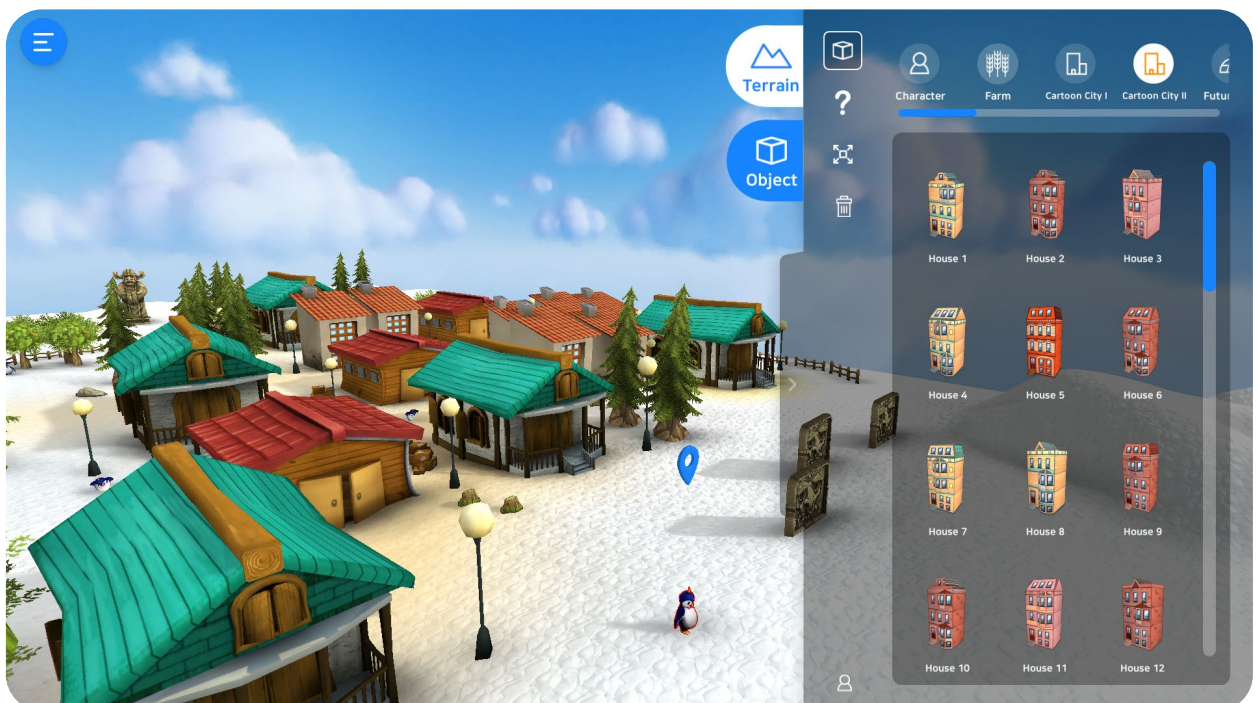
Cartoon City 2

More 3D Objects to choose from. Select roads, buildings, or other infrastructures.

VRWARE Edu School Map Design / Creation

Futuristic City

Build your own futuristic city with all the available objects from this category.
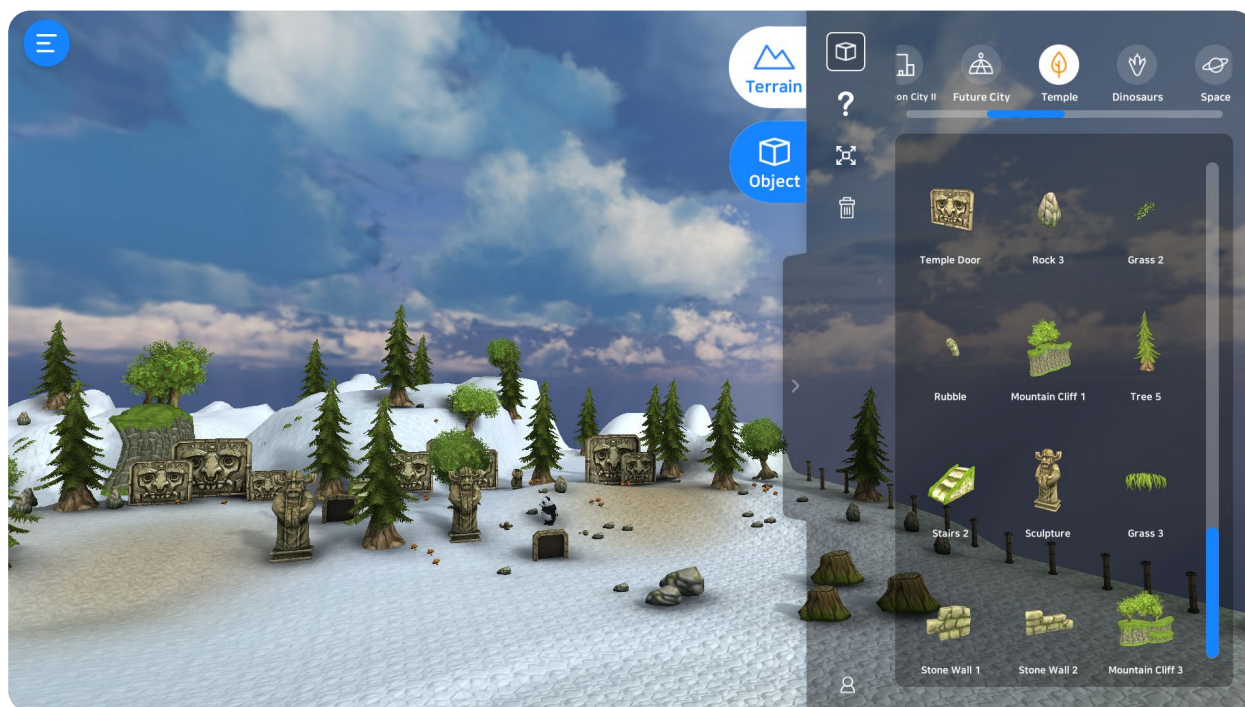
Temple

Select objects from forest category and build your own map.

VRWARE Edu School Map Design / Creation

Dinosaur Era

Create your own map with extinct creatures like dinosaurs.

Space Station

Create your own space map using planets and other space equipment objects.

VRWARE Edu School Map Design / Creation

Korean Landmarks 1, 2

Create your own map using Korean historical sites/landmarks objects.

World's Landmark 1, 2, 3

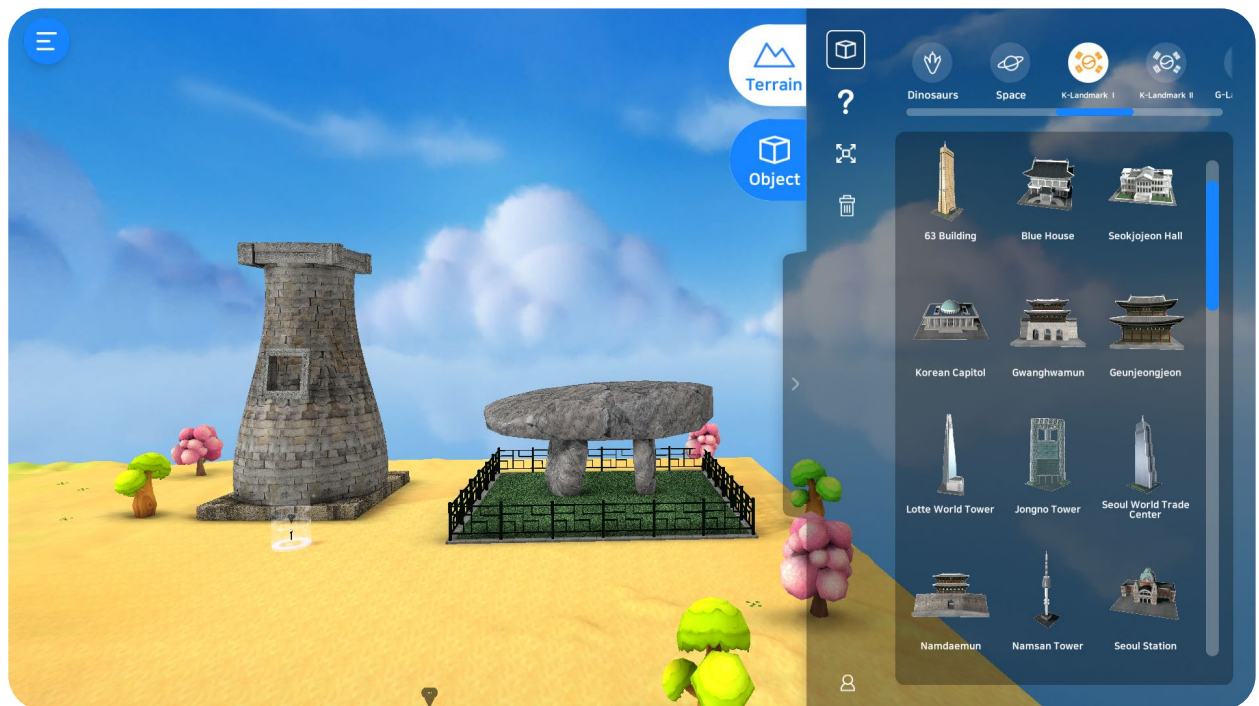Create a map using the famous landmarks provided.

2.10 Interactive Activities

1. Interactive Activities

Explore the map while doing fun activities such as quizzes, videos, etc.

2. Videos

Add and view educational videos inside the map.

3. Quizzes

Add quizzes and answer them while exploring.

4. Image Quizzes

Add quizzes made up of images and solve them.

5. Multiple Quizzes

Add multiple questions inside the map. Maximum of 10 quizzes at a time.

VRWARE Edu School Map Design / Creation

6. 360° Videos

360°-based VR Videos can be added inside the map.

7. Google Street View

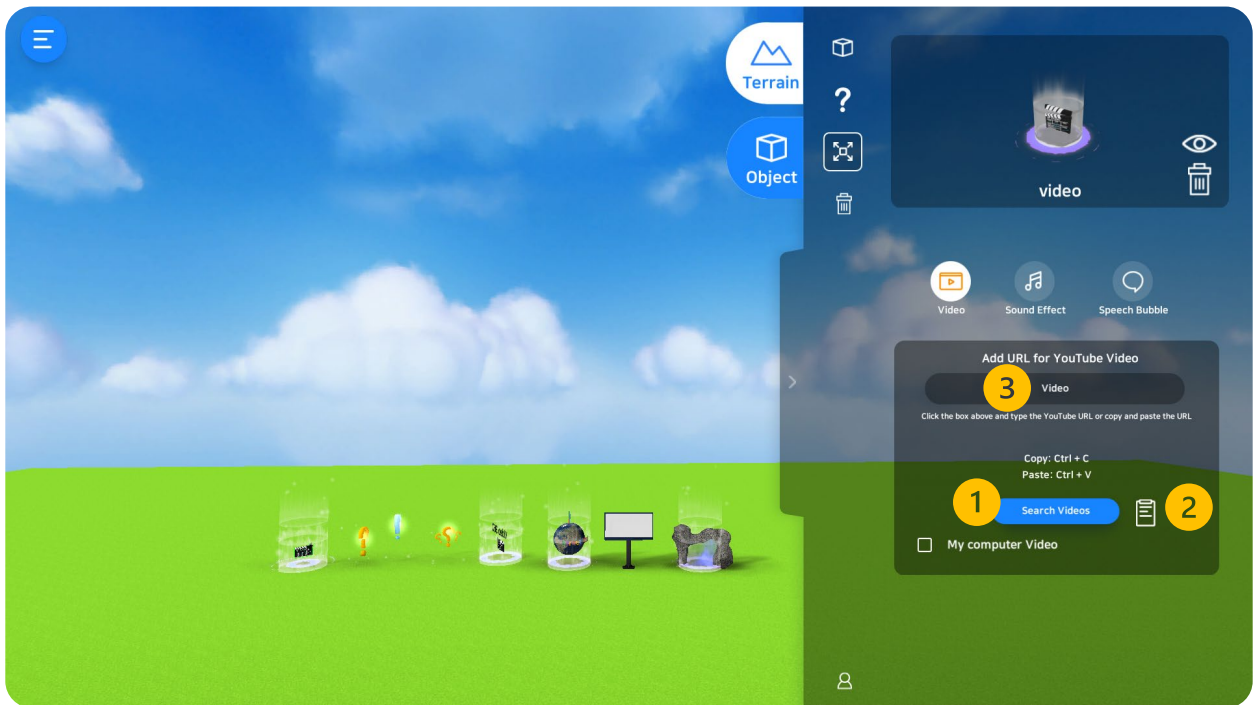View the actual location of the certain places you want to add inside the map.

8. Billboard

Add videos or images onto the billboard.

9. Portal

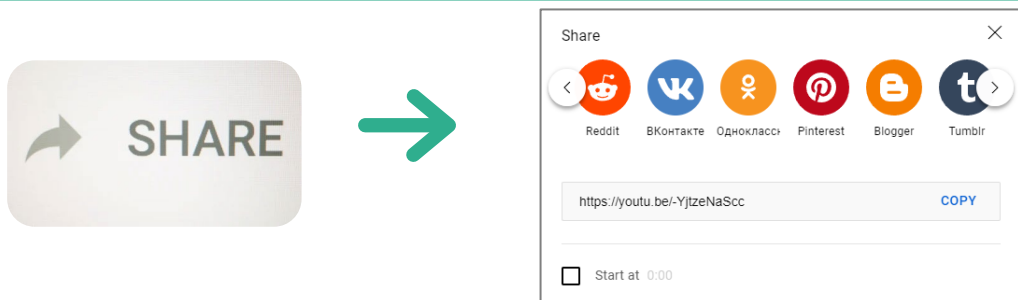Explore other connected maps when you enter the portal inside the map.

2.10.1 Upload Videos

1. Search Videos

You can search and add your favorite YouTube clips. Just click on the search box connected to YouTube and type the title of the video you want to watch. Copy the URL and paste it into the space provided.
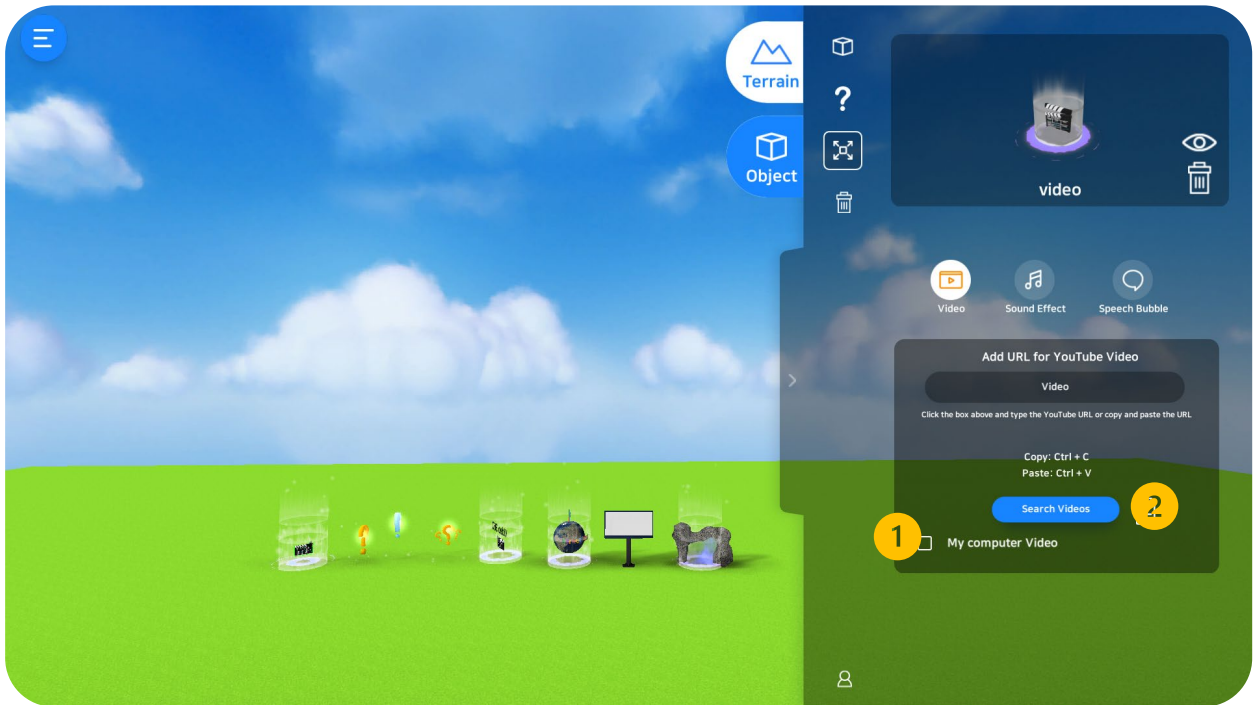
2. YouTube link copy / share

Search the video you want to add inside the map. Click the "share" button then click the "copy" button. Add the URL into the space provided.

3. Paste YouTube URL

On the provided space as shown in the image (number 1), paste the URL of the YouTube Video.

VRWARE Edu School Map Design / Creation
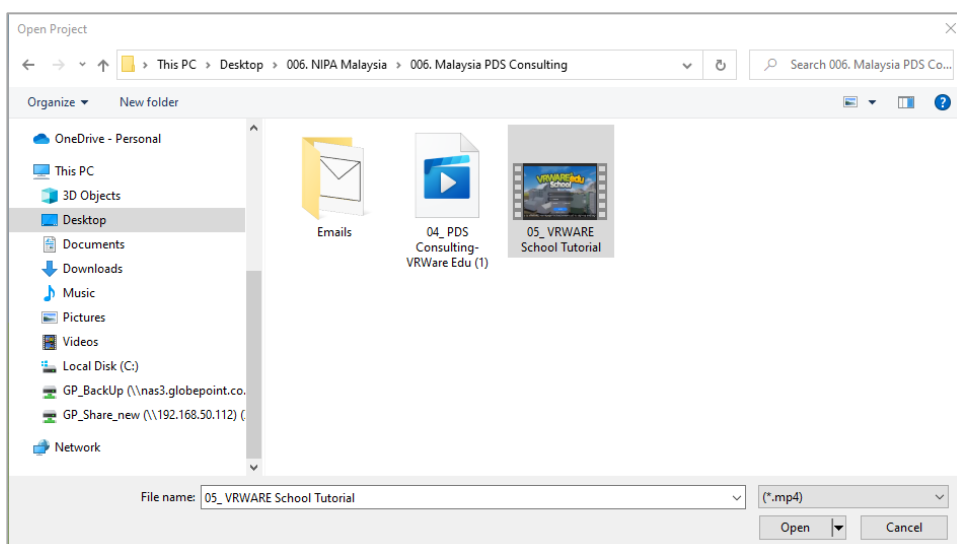

1. "My Computer" Videos

Click on the tab to add videos from your PC.

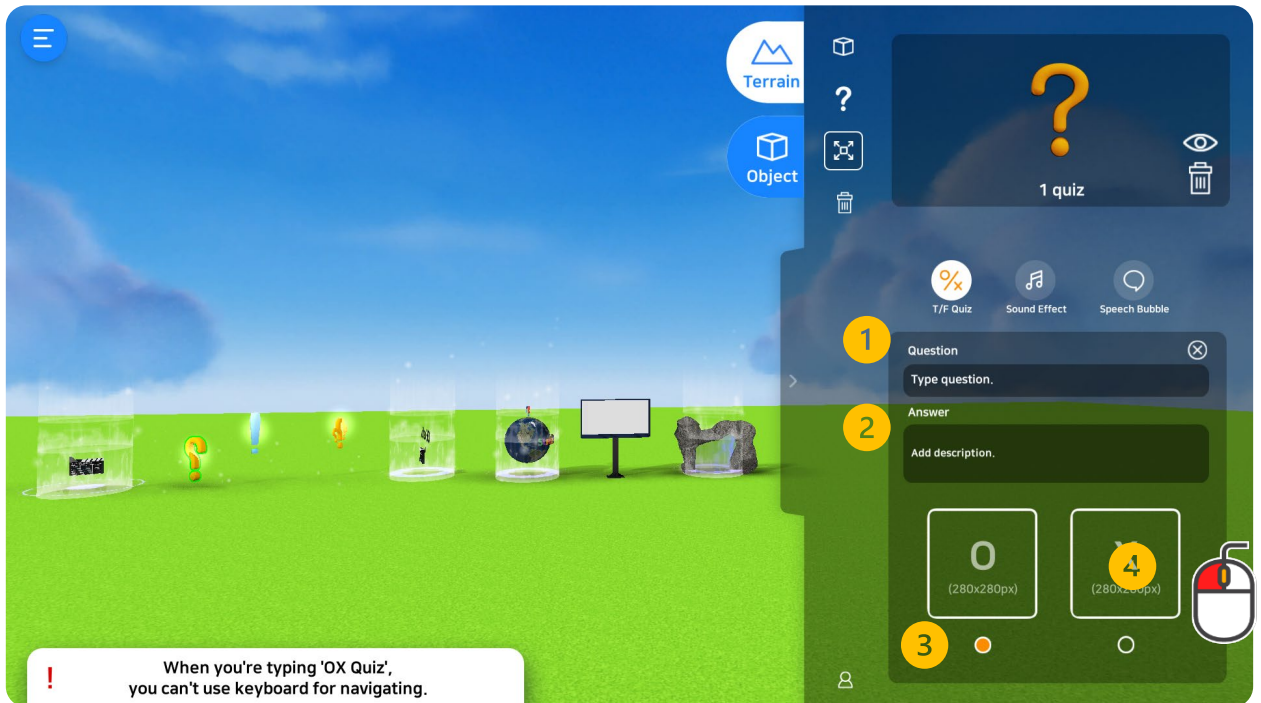* Videos from your personal PC will not be compatible when exploring the map.

2. Search Videos

Click "Search Video" button and a pop-up button will appear. Select the video you want to add then click "open" button.

*Available format of the videos: MP4, wmv, avi, ogv

2.10.2 Add Quizzes 1

1. Questions

Add questions. *You won't be able to save the map if the questions are left blank.

2. Additional Information

Lets you add any further information about the correct answer to the quiz.

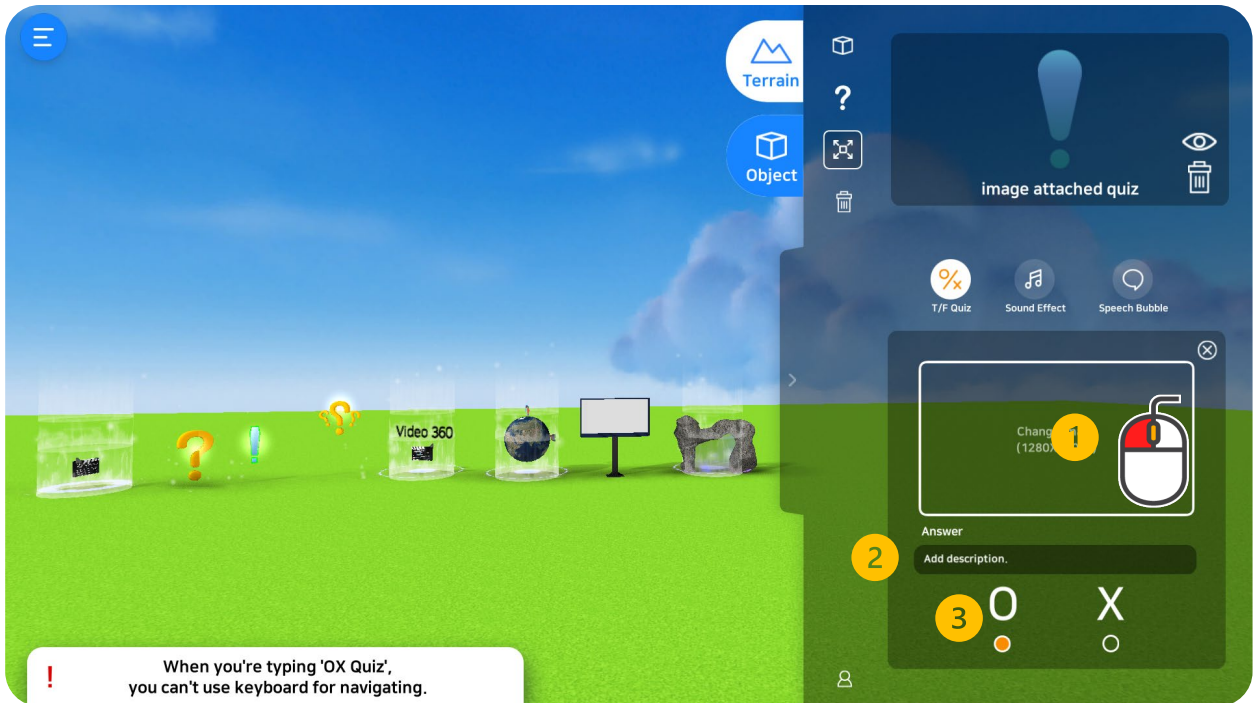## 3. Correct Answer Selection (O-Yes ; X-Wrong)

Select the correct answer for the question. Correct answers will be shown in blue color.

4. Add Images (jpg, png)

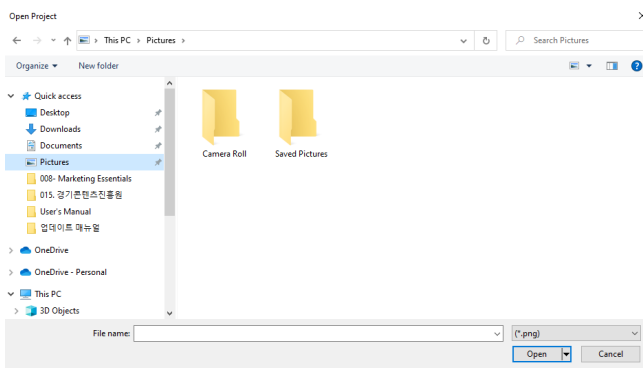Instead of a basic written question, add quizzes in the form of images.
* 280X280 pixels

2.10.3 Add Quizzes 2

1. Select Images (jpg, png)

Add images quizzes inside the map.

Click on the selected image on the pop-out window.

(1280X720pixels)

2. Comments

You can type a description of the quiz. This is the explanation you see after solving the quiz.

3. Select Correct Answer

Select the correct answers for the quizzes. Correct answers will be shown in blue colors.

2.10.4 Add Quizzes 3

1. Multiple Quizzes (Maximum of 10 quizzes)

Add multiple quizzes inside the map. Assign quizzes up to 10 quizzes.

*You won't be able to save the map once the questions are left blank.

2. Quiz description

You can type a description of the quiz. This is the explanation you see after doing the quiz.
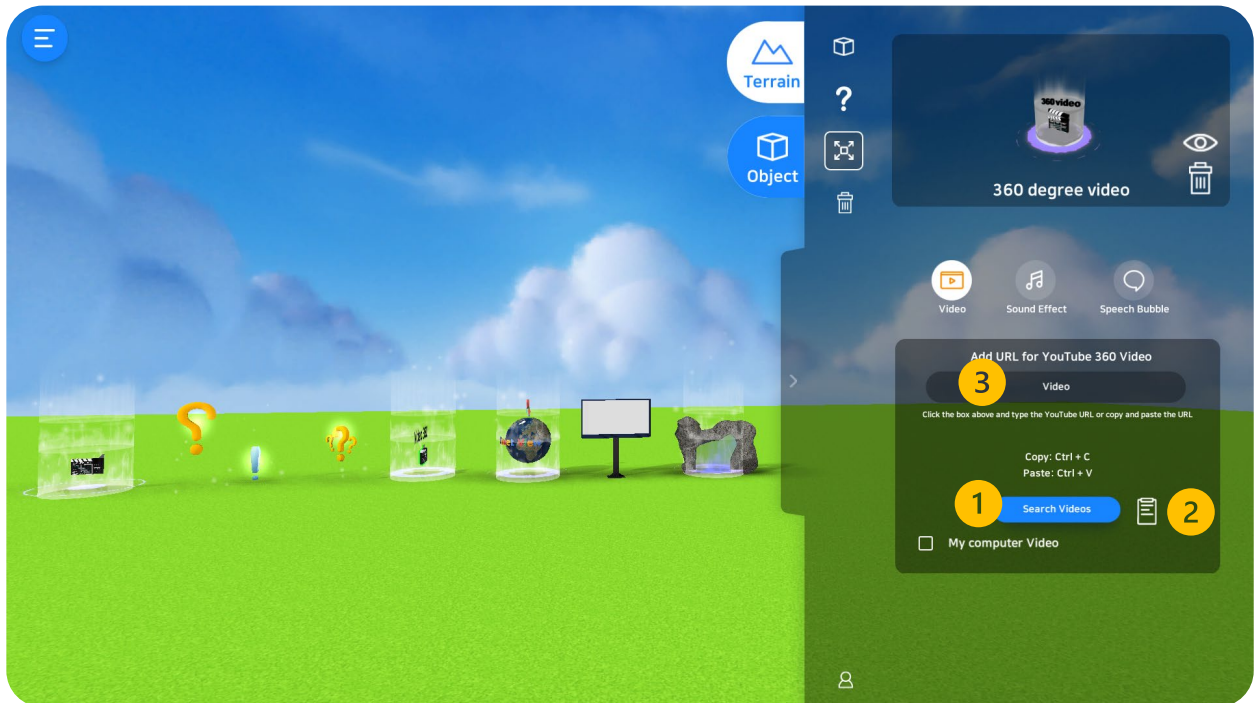
3. Select Correct Answers

Select the correct answers for the questions. Correct answers will be shown in blue color.

4. Add More Questions

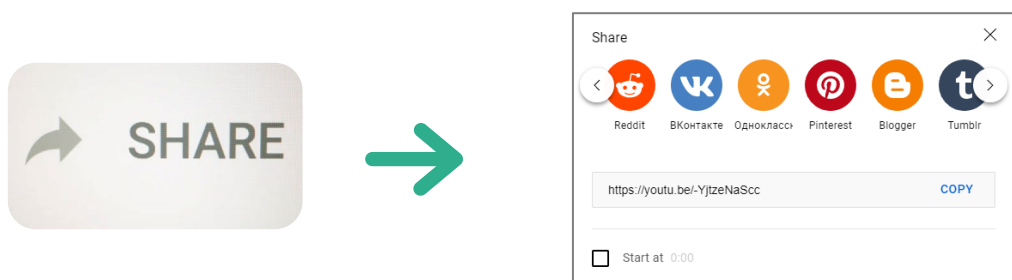Scroll down the bar to insert more questions.

2.10.5 Upload 360º Videos

1. Search Video (360°Videos)

There are several 360-based videos available in YouTube. Click on the Search Video button to open YouTube page. Search for the certain video you prefer and copy the URL.

2. Copy YouTube Link

Search the video you want to add inside the map. Click the "share" button then click the "copy" button. Add the URL into the space provided.

* Look for 360° icon when searching for the video.

3. Paste YouTube Link

On the provided space as shown in the image (number 1), paste the URL.

VRWARE Edu School Map Design / Creation
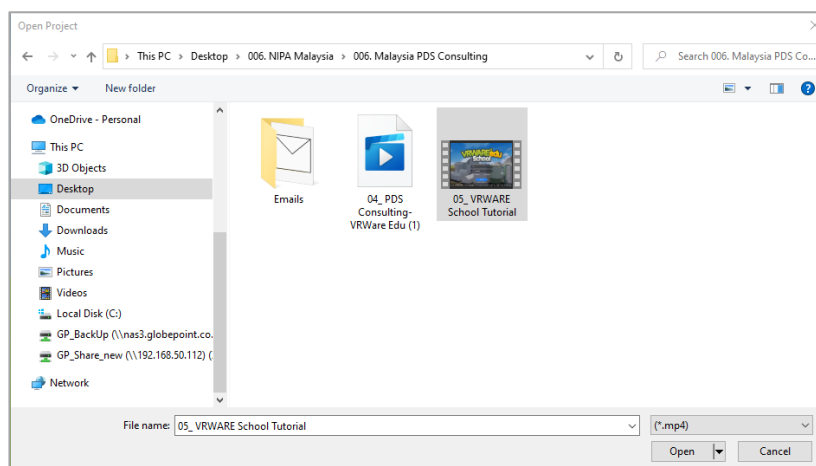

1. "My Computer" Videos (360° Videos)

Click on the tab to add videos from your PC.
* Videos from your personal PC will not be compatible when exploring the map.
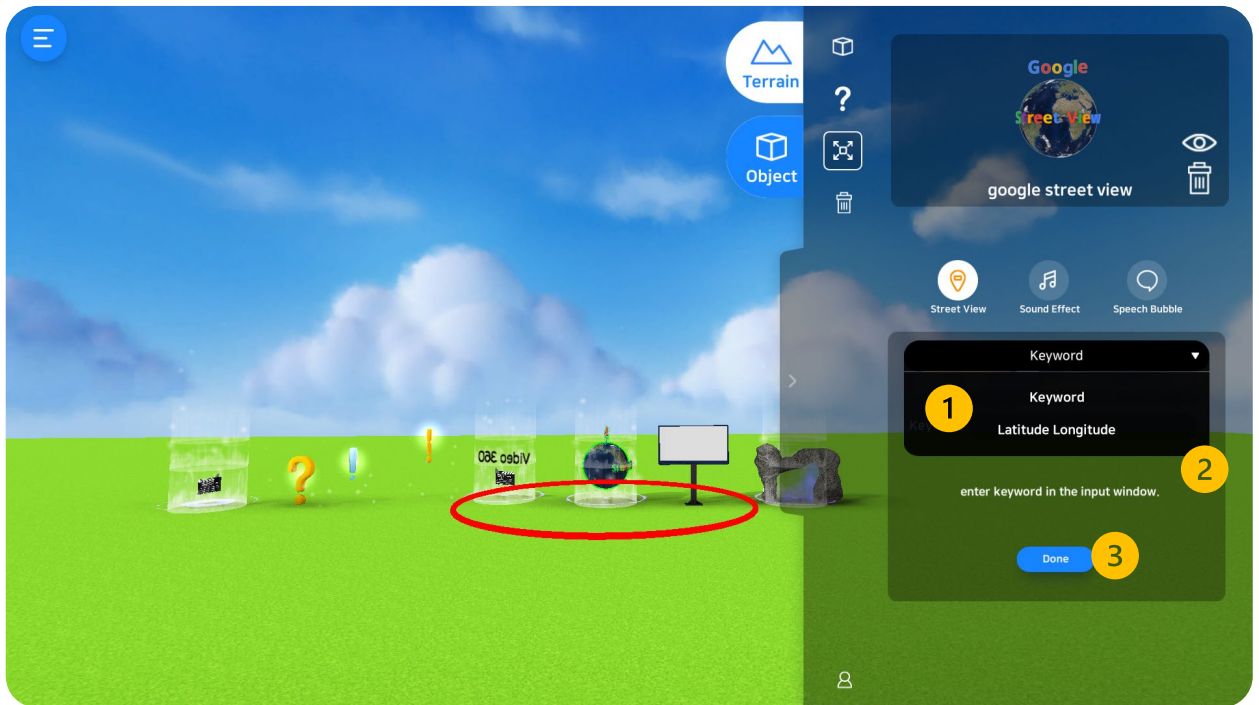
2. Search 360° Videos

Click "Search Video" button and a pop-up button will appear. Select the video you want to add then click "open" button.

*Available format of the videos: MP4, wmv, avi, ogv

2.10.6 Google Street View

1. Select

There are 2 ways to add google street view inside your map.
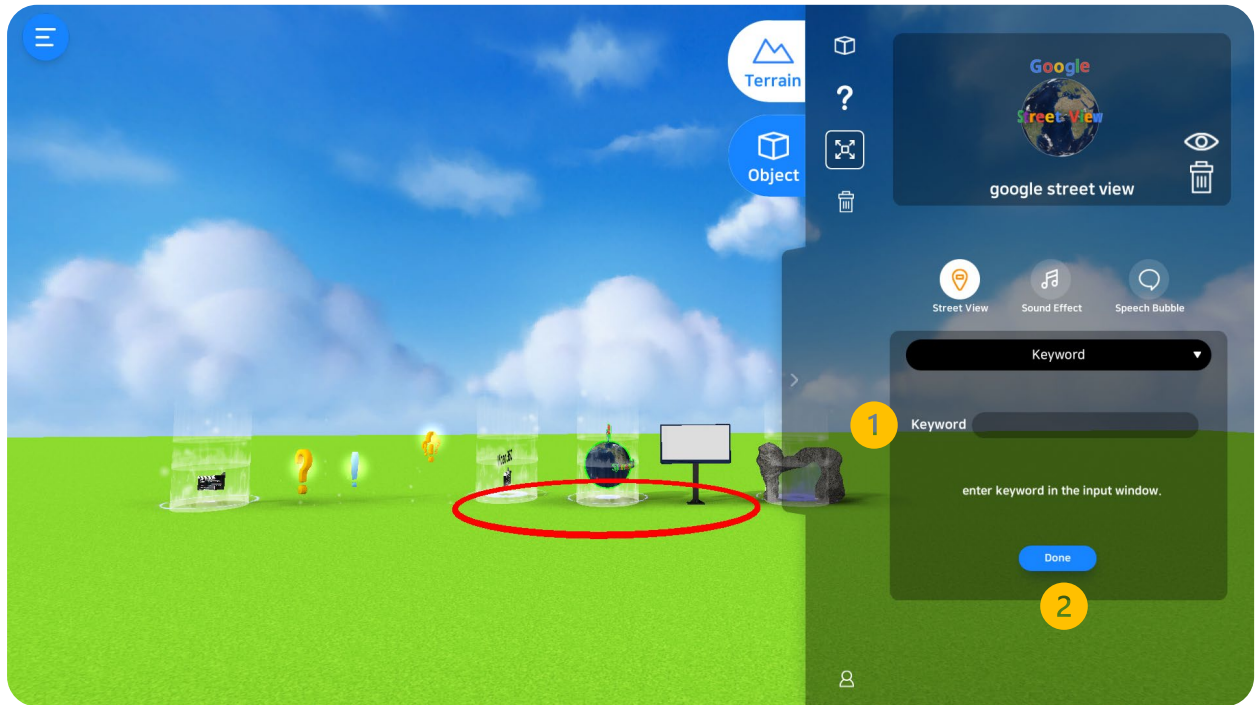① Coordinates-"longitude and latitude" ② Keyword

2. Enter Information

Select the preferred way of adding google street view then enter the information in the space provided,

3. Done Button

After providing all the information into space provided, click done button.

VRWARE Edu School Map Design / Creation

1. Keyword

Enter the keyword for the certain place you want to add.
E.g.; Eiffel Tower, Gyeongbukgong, 63 Building, etc.
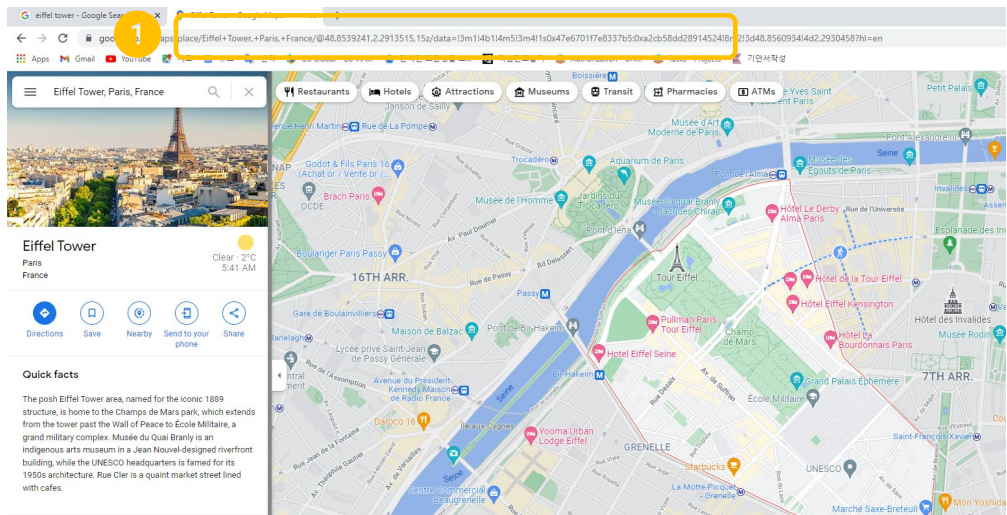
2. Confirm

After providing all the information in the space provided, click confirm button.

VRWARE Edu School Map Design / Creation

1. Google Street View URL

Copy the URL of the certain place in the internet's search box.

2. Paste URL

Enter the URL in the space provided.

3. Done

After providing all the information in the space provided, click done button.

2.10.7 Billboard

1. Billboard

Add videos and images into the billboard and view them while exploring the map.

2. Select Videos and Images

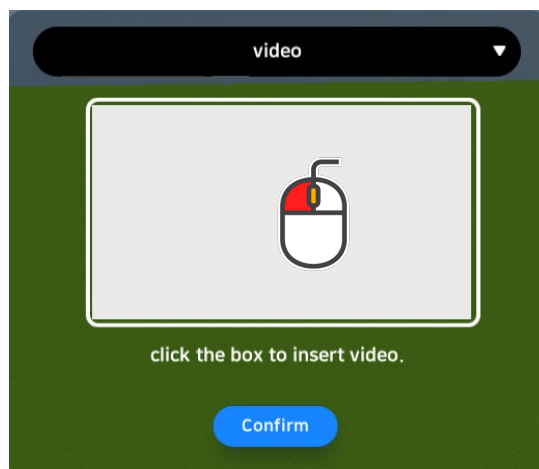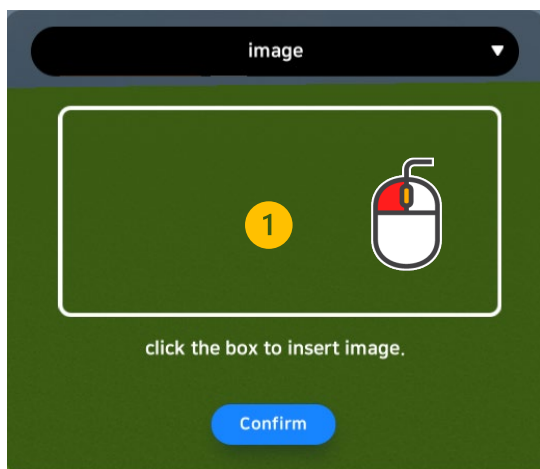① Images ② Videos ③ URL(YouTube) Select the preferred method.

3. Select Videos and Images

Once clicked, a pop-out window will be shown to select videos.

4. Done Button

After selecting the images and videos, click done button.

VRWARE Edu School Map Design / Creation

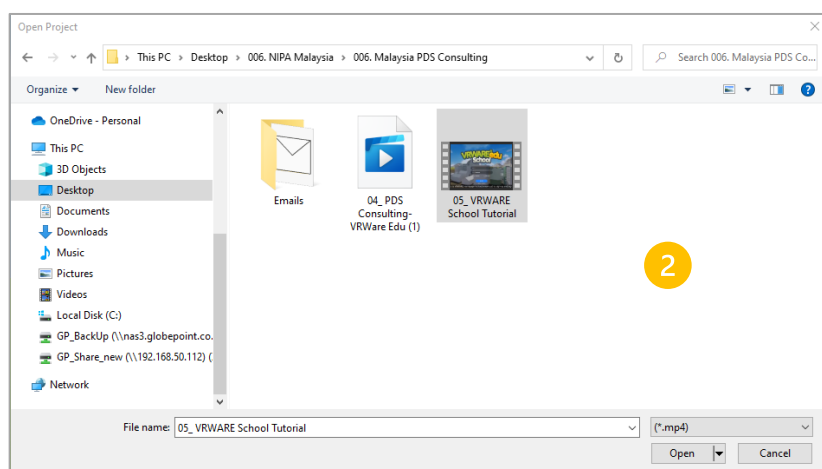## Adding Images and videos

1. Selection

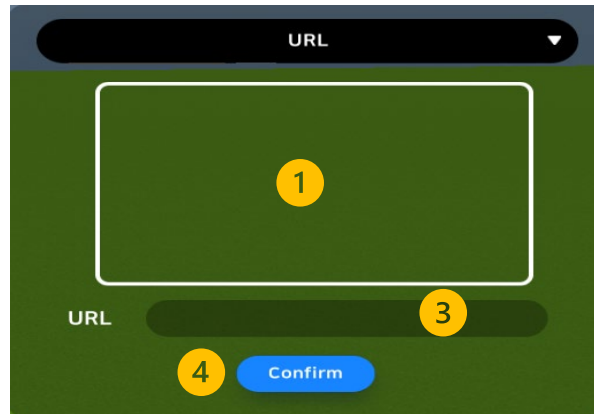Click the box as shown in the image.

2. Select Images and Videos

Select the images and videos you want to add into your map.

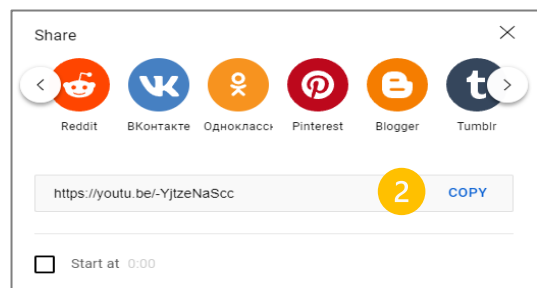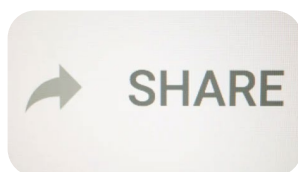# VRWARE Edu School Map Design / Creation

Paste URL

1. Search Videos

Add videos into your map using YouTube Videos. Click the search button to open YouTube site. Search for your favorite video.

2. Copy YouTube Link

Search the video you want to add inside the map. Click the "share" button then click the "copy" button. Add the URL into the space provided.

3. Paste YouTube Link

On the provided space as shown in the image (number 1), paste the URL of the YouTube Video.

4. Done

After providing all the information in the space provided, click done button.

2.10.8 Portal

1. Portal

Add portal into your map. Portal lets you explore other maps.

2. Select Map

Click the arrow as shown in the image and select maps on the list provided.

3. Selected Map

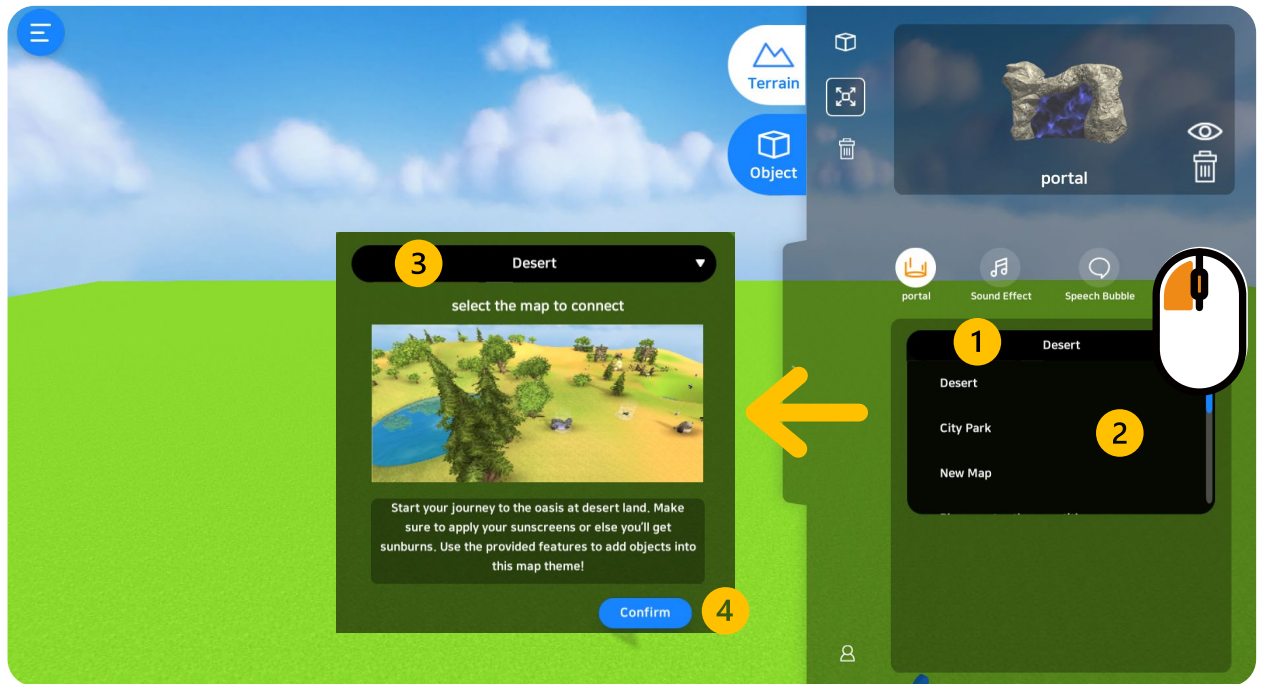Preview the map with the thumbnail image.

4. Selected Map Intro

View description of each maps.

5. Shared map

Shared maps can be linked to portals.

VRWARE Edu School Map Design / Creation

1. Map List

Click to preview the maps.

2. Select Map

You can download the selected map by clicking the "download" button.
* Downloaded maps cannot be downloaded again.

3. Map Intro

Each maps contains thumbnail images and description.

4. Download

Click "download" button to finish.

2.11 Character BGM

1. Character BGM Settings

Customize your character's BGM. Click the note icon as shown and select preferred background. To cancel, just click the list again.

2. Character BGM Selection
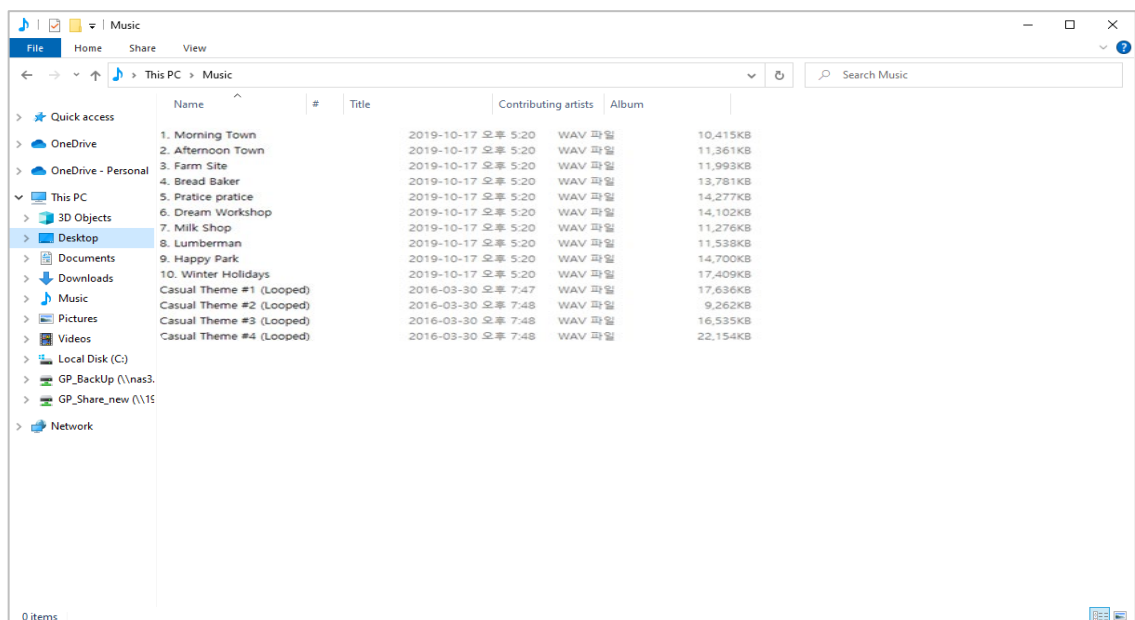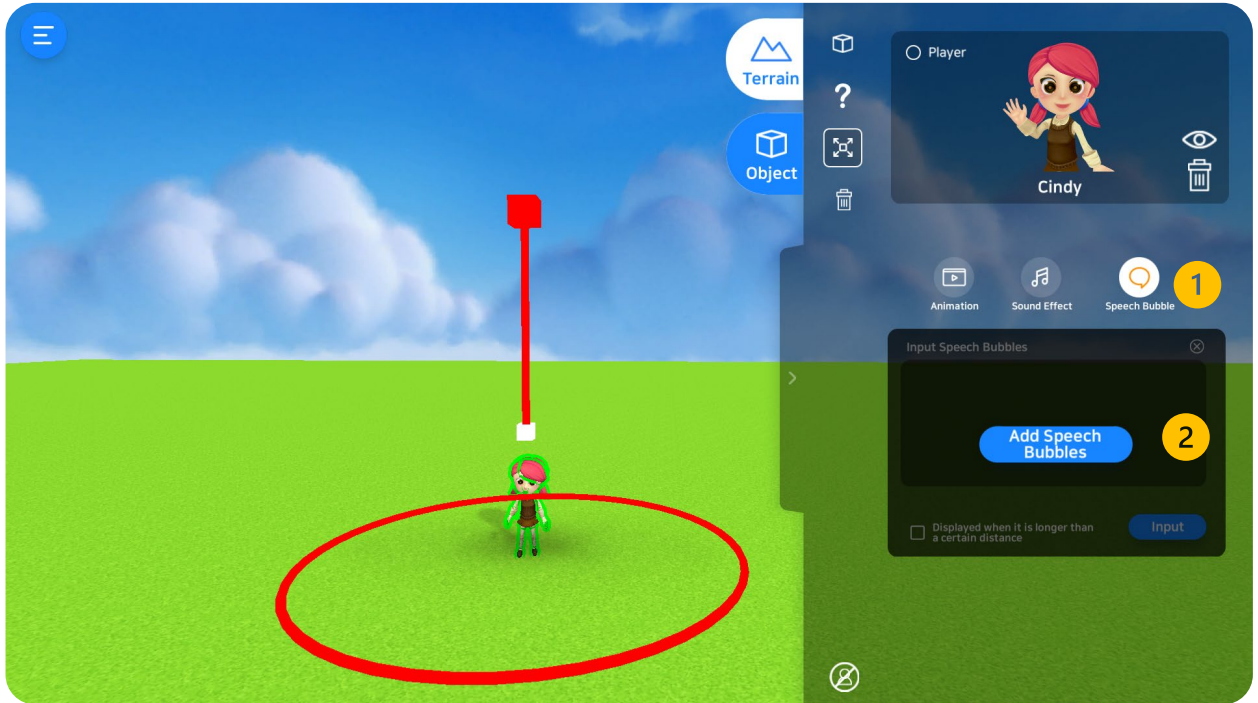
There are a total of 14 different BGM's available.

1. Adding Selected BGM

Click "Add BGM" to view pop-out window. Select preferred music then click "open".
* Available format of BGM: MP3, WAV, OGG.

2.12 Speech Bubble

1. Speech Bubble

Customize your 3D characters by adding speech bubbles. Select then click your characters to show customized settings.

2. Add Speech Bubble

Click the character then click the speech bubble icon to add text.

VRWARE Edu School Map Design / Creation

1. Add Text to Speech Bubble

Add text to the speech bubble.

2. Other Settings

Click "Displayed at a certain distance" so the speech bubble will only be shown when the character player is nearby.

3. Done

After providing the text, click done to finish.

4. Speech Bubble Settings

Sample is shown in the image below. When a character is far from the certain object, speech bubble is shown as (…) when nearby, text will be shown.

2.13 Delete Object

1. Delete Multiple Object

Delete multiple object at once.

2. Delete

Click the trash icon, right click on the mouse and drag the objects you want to delete.

2.14 Main Settings

1. Map Settings

Main menu contains save map and other settings.

2. Settings

① Save: Save created maps.

② Save as: Assign/ Change name of your created maps.

③ Map Preview: Explore map in computer mode (not VR mode)

④ Other Settings: Set other preferred settings.

⑤ Go Back: Go to the main menu

2.14.1 Save / Save As
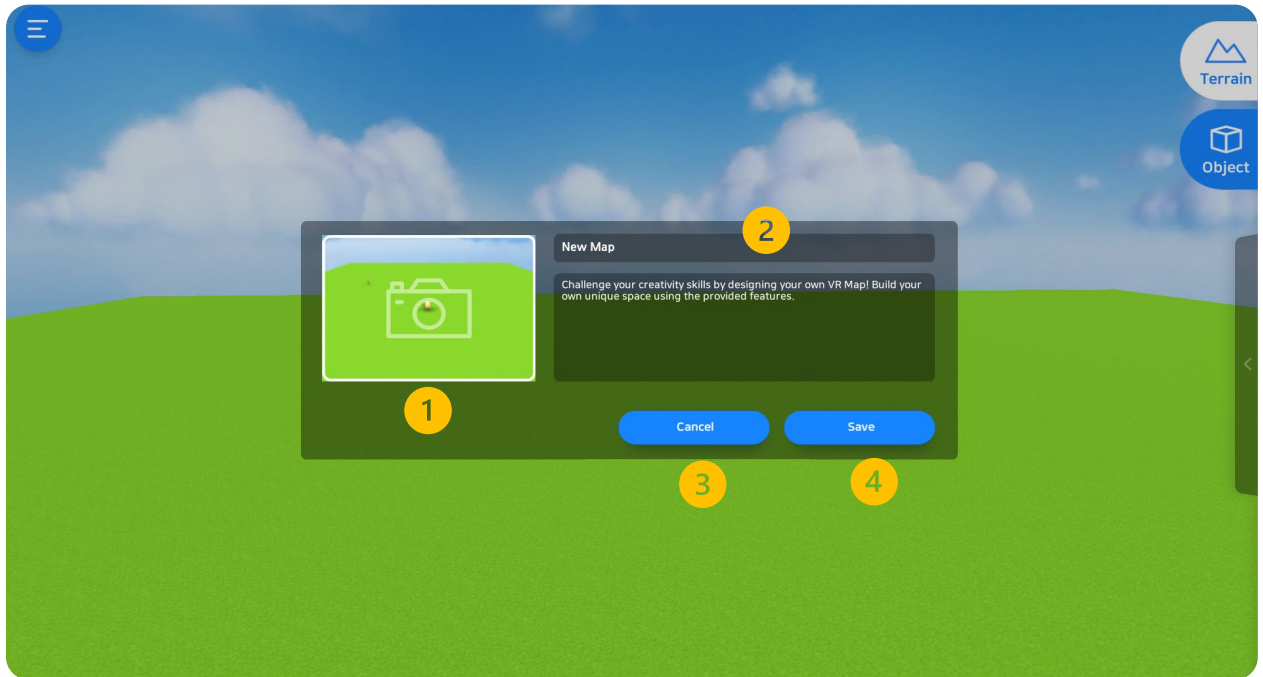
1. Map Thumbnail Image

Assign a thumbnail image for your created map.

2. Map Title

Provide title for your map (characters such as "#, %" cannot be used)

3. Cancel

Cancel saving the map.

4. Save Map

Save your created map.

2.14.2 Map Preview

Press the spacebar to capture the screen.
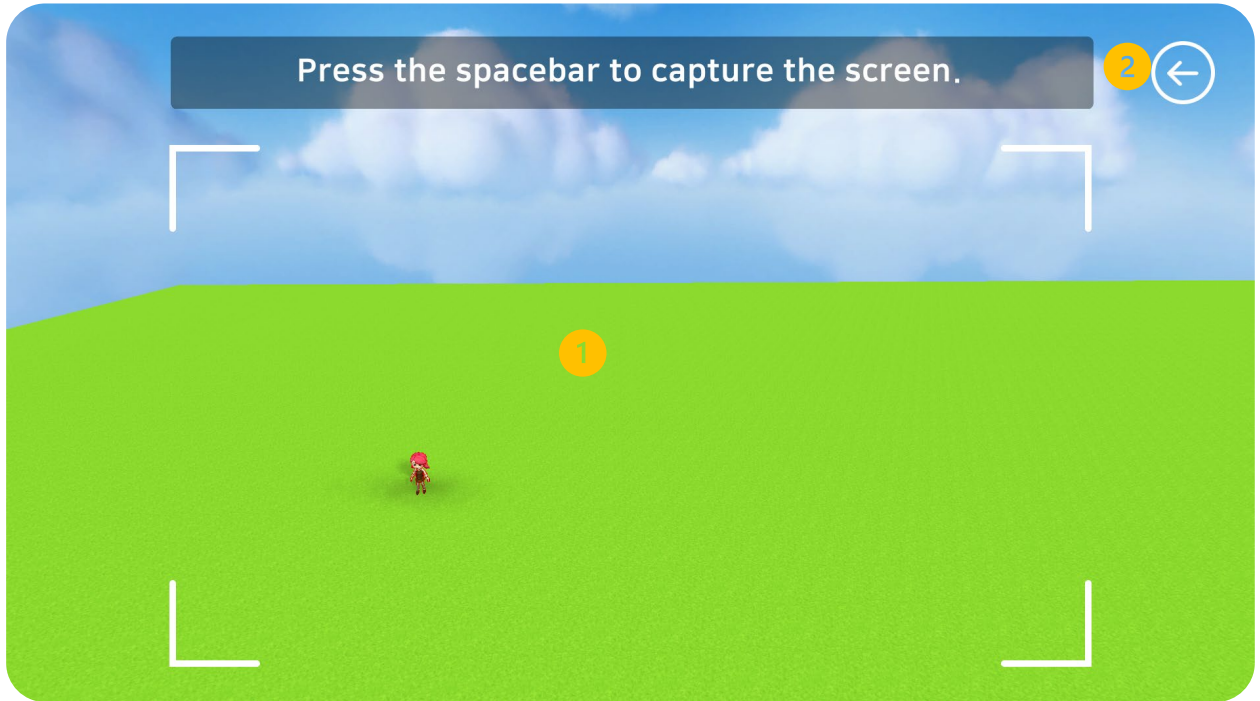
1. Map Preview Image

Drag the mouse to the angle of the image you want then hit spacebar to capture.

Spacebar

2. Go Back

Select Preview to save image.

VRWARE Edu School

CHAPTER 3

Exploration

3.1 Exploration

1. VR Player

On the main menu, select "VR Player" to explore map.
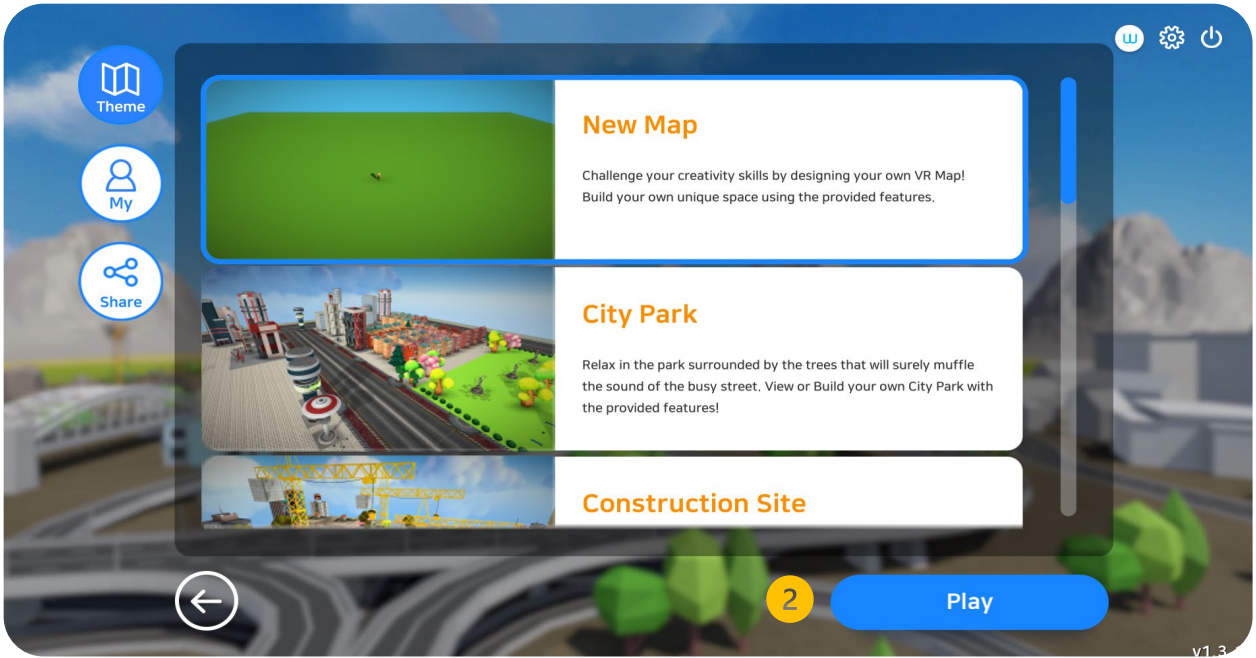
2. Select Map

Select map you want to explore then click play.

VRWARE Edu School Exploration

1. Map Exploration (VR Maker)

Save map then click the menu button on the upper left corner. Select map preview to explore map.

*Make sure to save you map before clicking preview to save the changes done.

3.2 Start
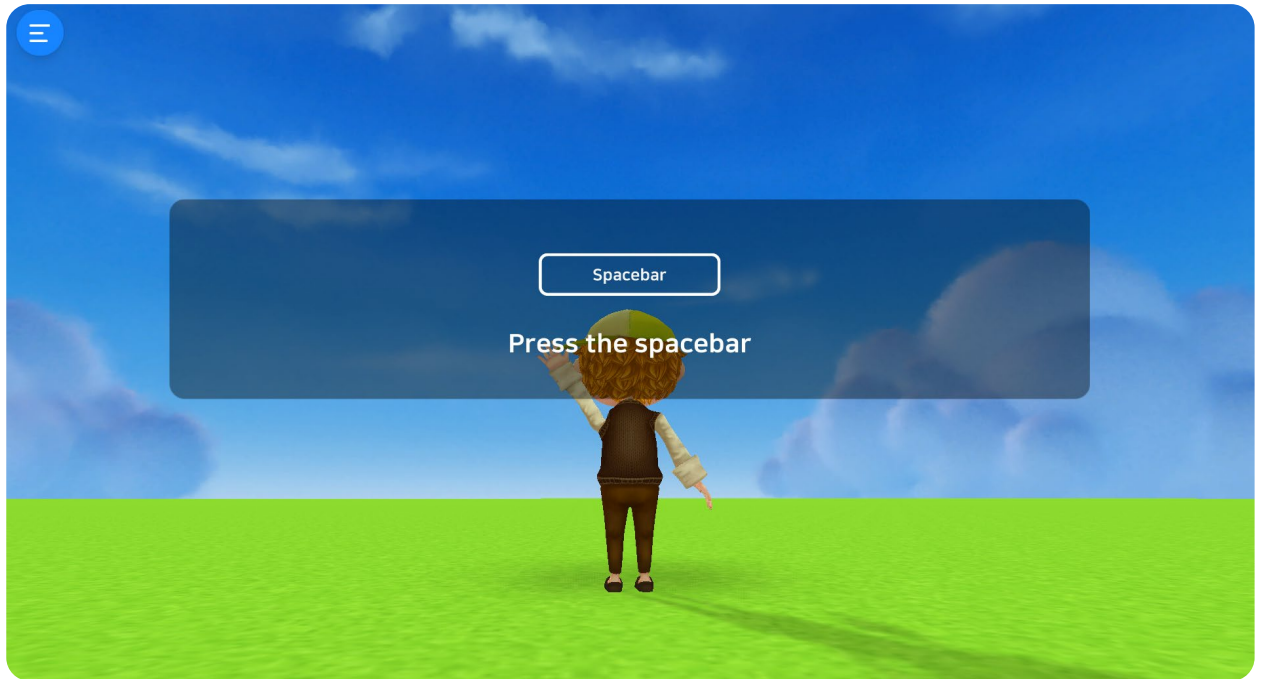
1. Start

Hit the spacebar on your keyboard to start exploring.

<div style="text-align:center">

Spacebar

</div>

VRWARE Edu School Exploration
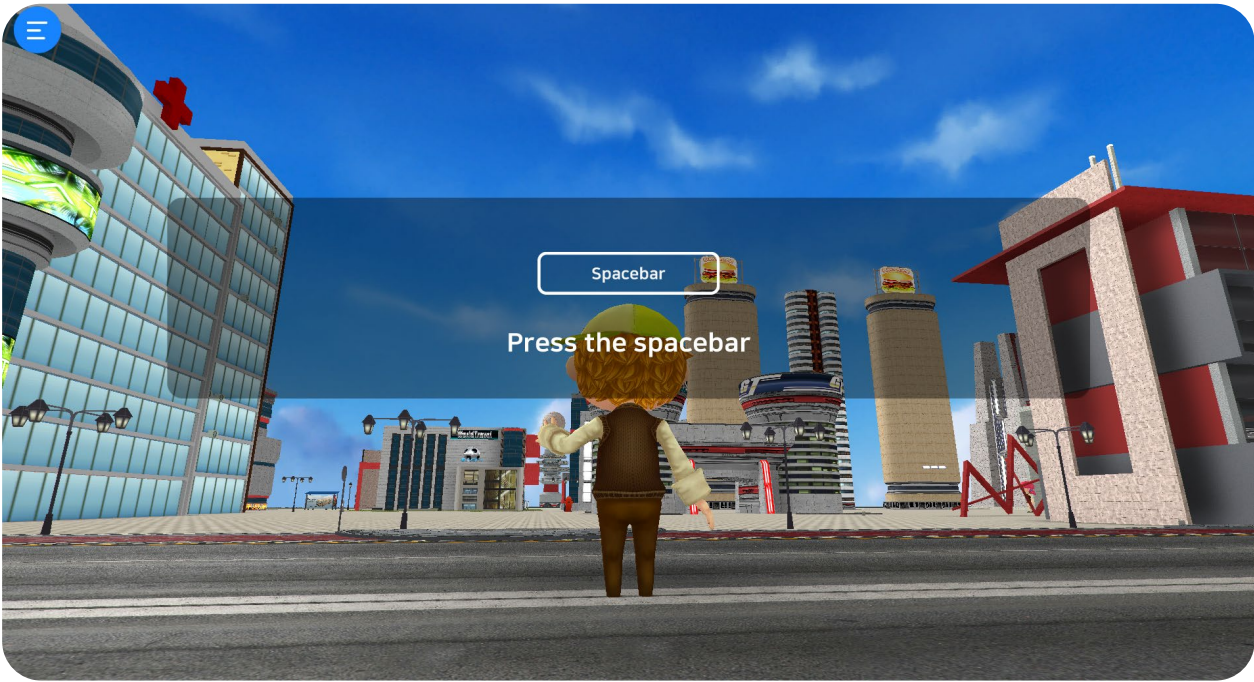
Start

Hit the spacebar to start exploring your VR map.

Spacebar

3.3 Display Settings
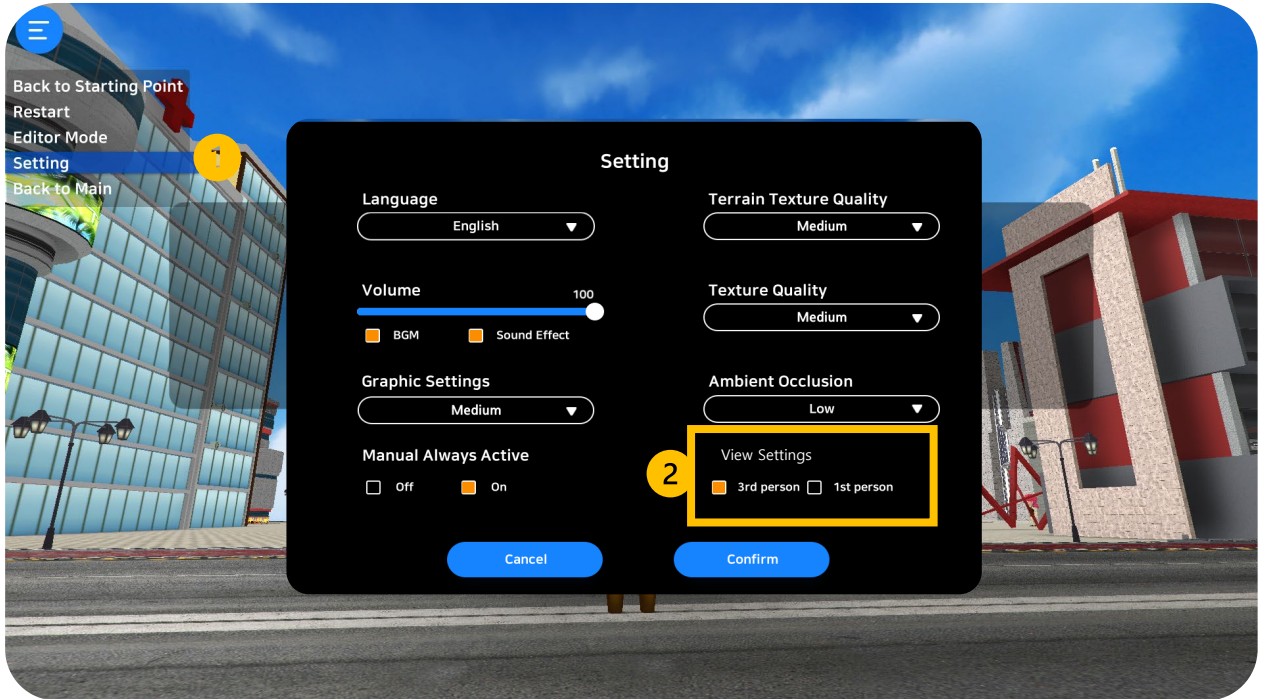
1. Settings

Click the menu button placed on the upper left side corner. Select settings.

2. Display Settings

Viewing modes are available in two different modes while exploring. Immersive mode and game mode

3.4 Direction Settings

1. Forward

Press '↑' key button to go forward

2. Sideward / Backward

Press '←' key button to go left.
Press '→' key button to go right.
Press '↓' key button to move backward.

3. Quiz Sign

Quiz sign means that there's a quiz needed to be answered nearby.

3.4.1 Keyboard Keys

Keys

Refer to the following keys for instructions.

Movement	Keyboard Key
Forward	↑
Right	→
Left	←
Backward	↓
Yes (O)	O
No (X)	X
Escape / Exit	ESC

3.5 OX Quiz

1. OX Quiz

Look for the '?' sign to answer the quizzes.

VRWARE Edu School Exploration

OX Quiz

Press 'O' key if the answer is correct.
Press 'X' key if the answer is wrong.
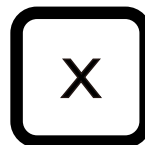
3.5.1 Add Quizzes

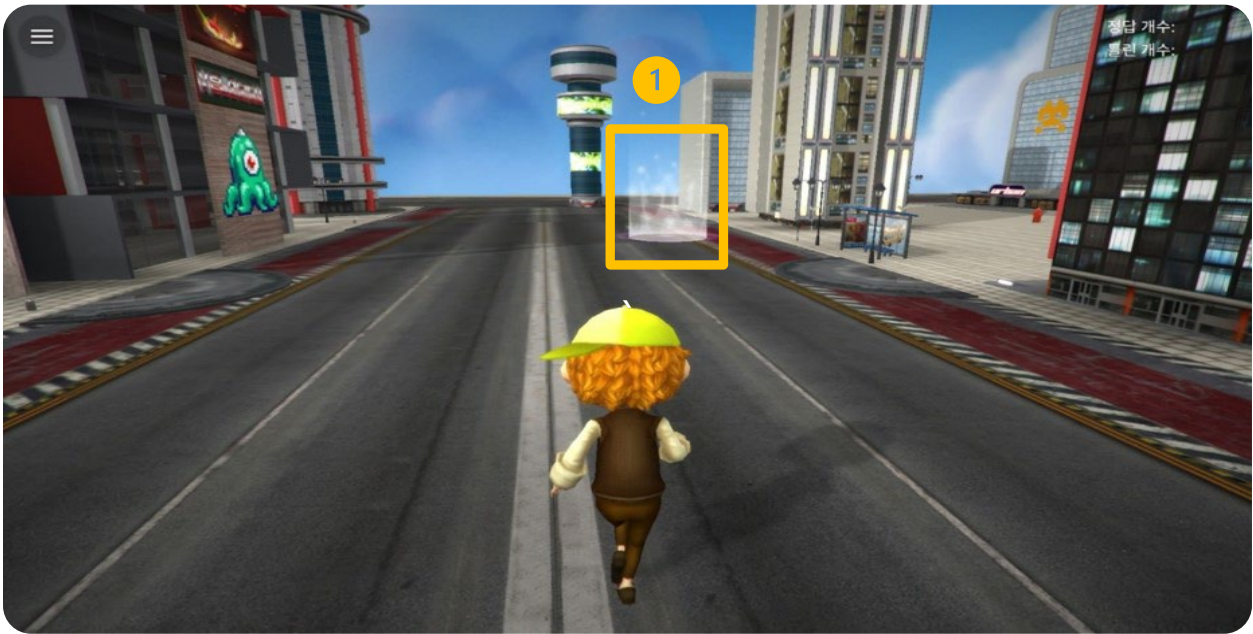### 1. Adding Yes/No Quizzes

Results will be shown after answering the quiz. Additional information about the answer will also be provided.

2. Close Yes/No Quizzes Tab

Click "ESC" button to leave the quiz or press 'ESC' button on the keyboard .

ESC
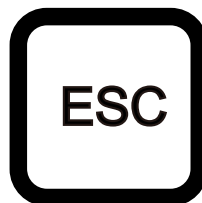
3.6 View Videos

1. Watch Educational Videos

Look for a video icon to watch videos while exploring the map.

2. Close the Video Tab

Click "ESC" button to close the video or press 'ESC' button on the keyboard .

ESC

3.7 View 360° Videos

Right click to drag and view the video

1. 360° Videos

Right click while dragging the mouse to view the video.

2. Close 360° Video Tab

Click "ESC" button to close the quiz of press 'ESC' button on the keyboard .

ESC

3.8 Google Street View

1. Explore Google Street View

Look for the google street view icon while exploring the map.

2. Close Google Street View Tab

Click "ESC" button to close the google street view tab or press 'ESC' button on the keyboard .

ESC

3.9 Billboard
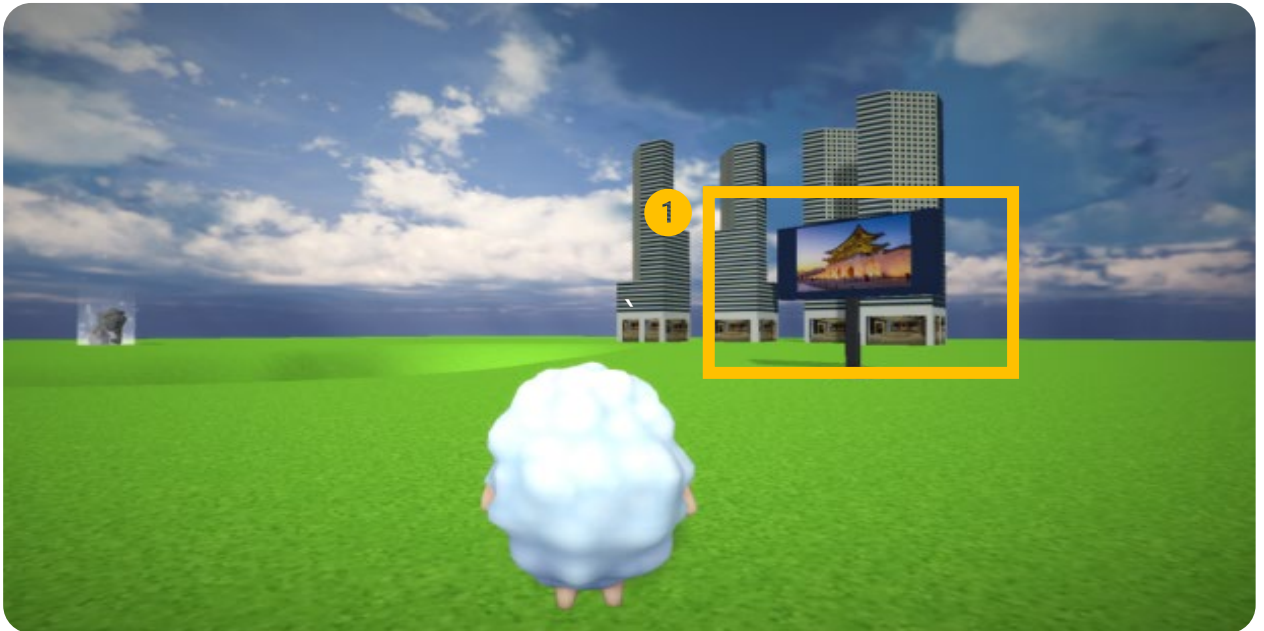
1. Billboard

Add videos or images in the billboard.

3.10 Portal

1. Explore Portal

Look for the portal icon while exploring the map.

2. Return

Click the turn button as shown in the image above to go back to your original map.

3.11 Settings

1. Starting Point

Player will start from the beginning.

2. Restart

Player will restart.

3. Editor Mode

Edit some of the features inside your map by adding more 3D objects or videos, etc.

4. Settings

Settings window will open.

5. Main Menu

Go back to the main menu.

VRWARE Edu School

CHAPTER 4

HMD

4.1 Download App (Google Play Store)
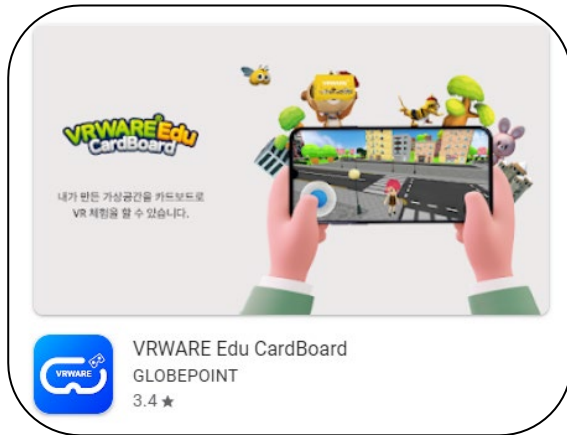
In the Google Play Store search box, enter "VRWARE Edu School" to download the app.

VRWARE Edu School Cardboard

4.2 Run the Android Program

1. Log-In

2. Play
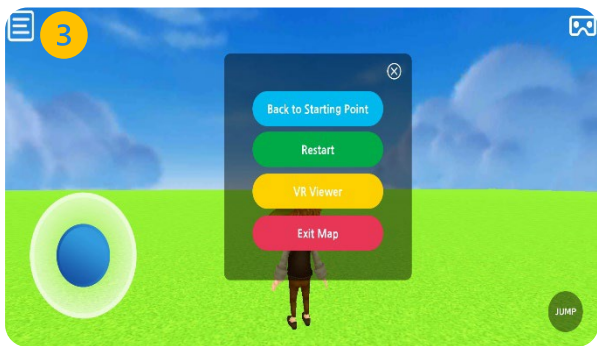
3. Mode Selection

4. VR Map Exploration

4.3 Exploration (Cardboard)
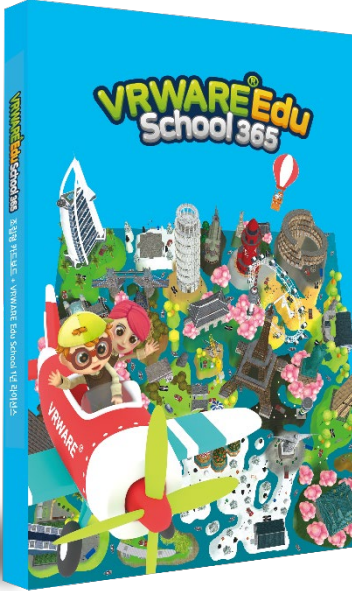
Motion
Button
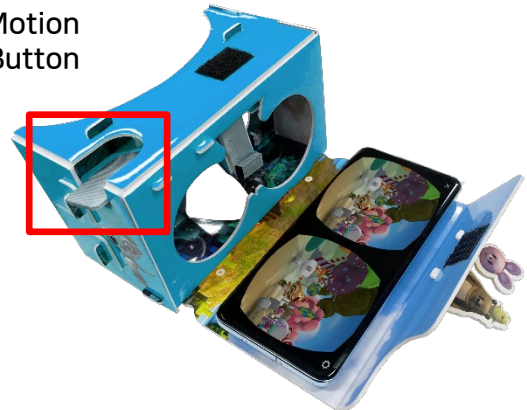
Press the button located on the side to start.

Explore all the activities inside the map. Keep on pressing the side button to move towards each activities. (quiz, videos, etc.)

VRWARE Edu School HMD
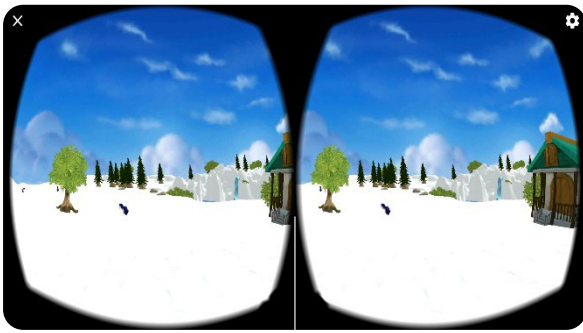
Exploration

You can freely experience the virtual space that I created.

Quiz

Toggle the white dot to the center of the quiz icon then click the button.

Videos

You can watch two types of videos. Regular videos and 360° videos.

VRWARE Edu School

CHAPTER 5

Meta Player

5.1 Meta Player: How to Start

Meta Player

On the main menu under the visual thinking category, select meta player and click start.

5.2 Build a Team
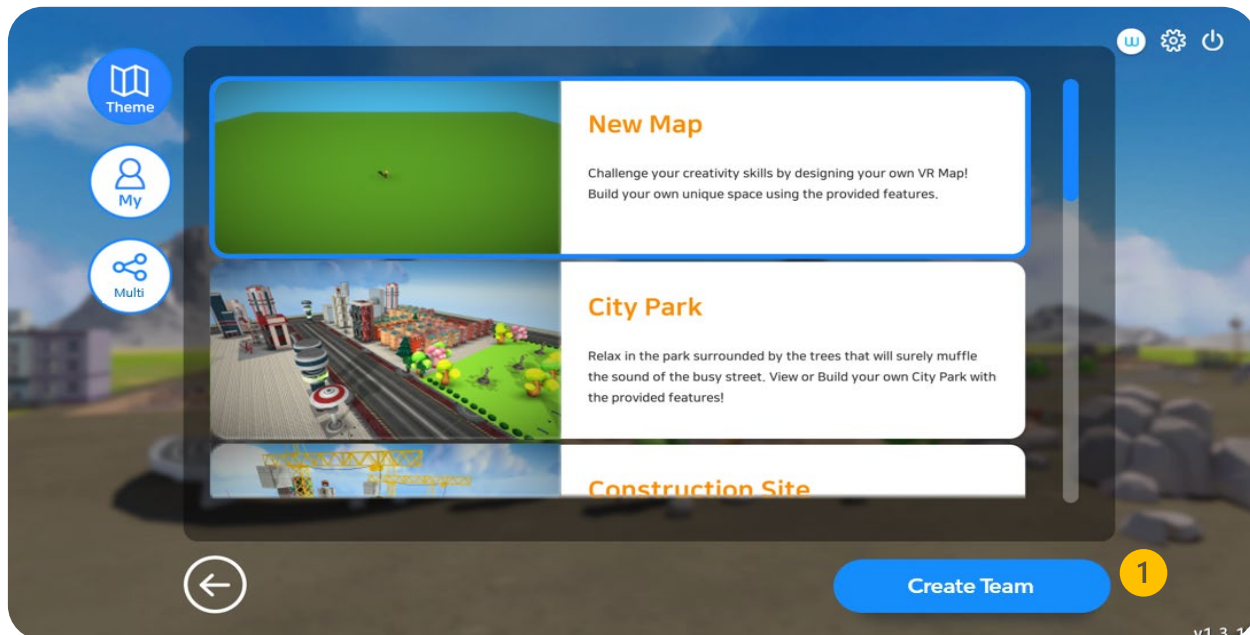
1. Build a Team

Select preferred VR map and click "Build a Team" button.
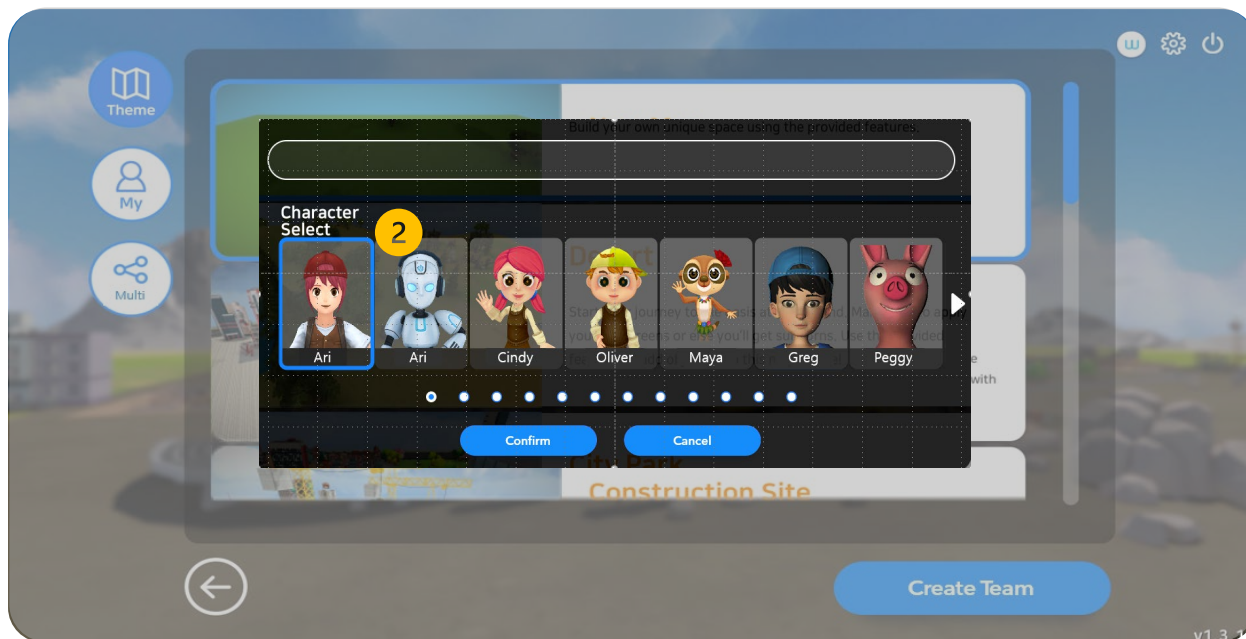
2. Insert Team Name and Select Character

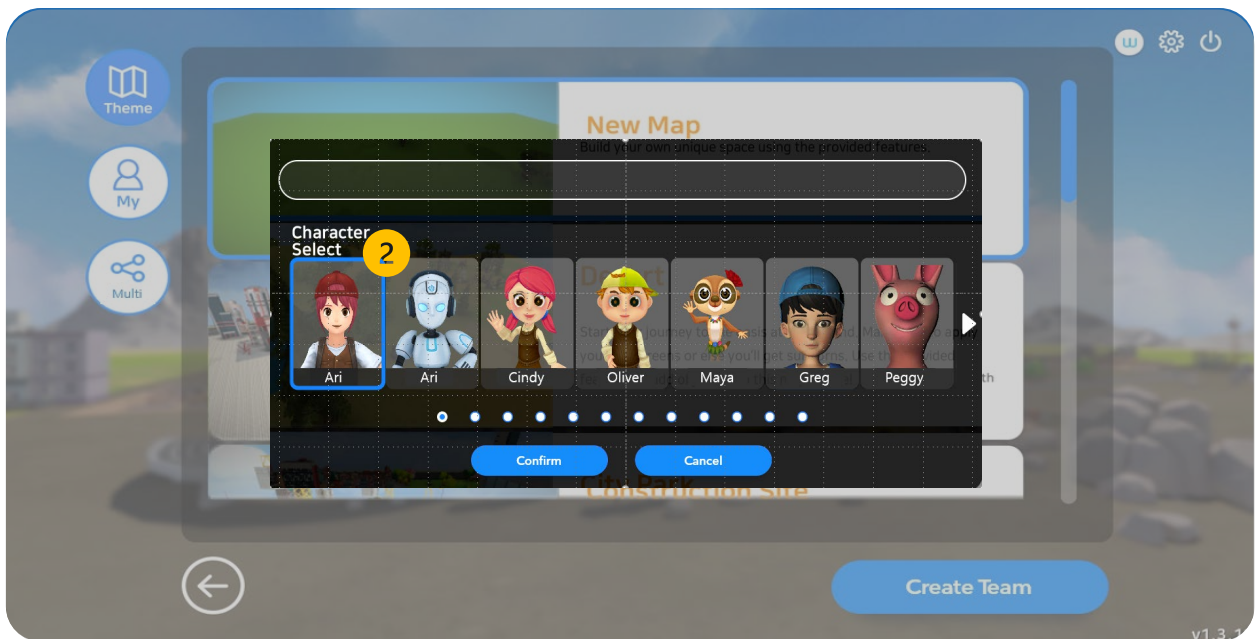Provide a name for the team and select character for each members.

VRWARE Edu School Meta Player

1. Team Waiting Room

After creating a team, wait for other users to join.

5.3 Map Entry
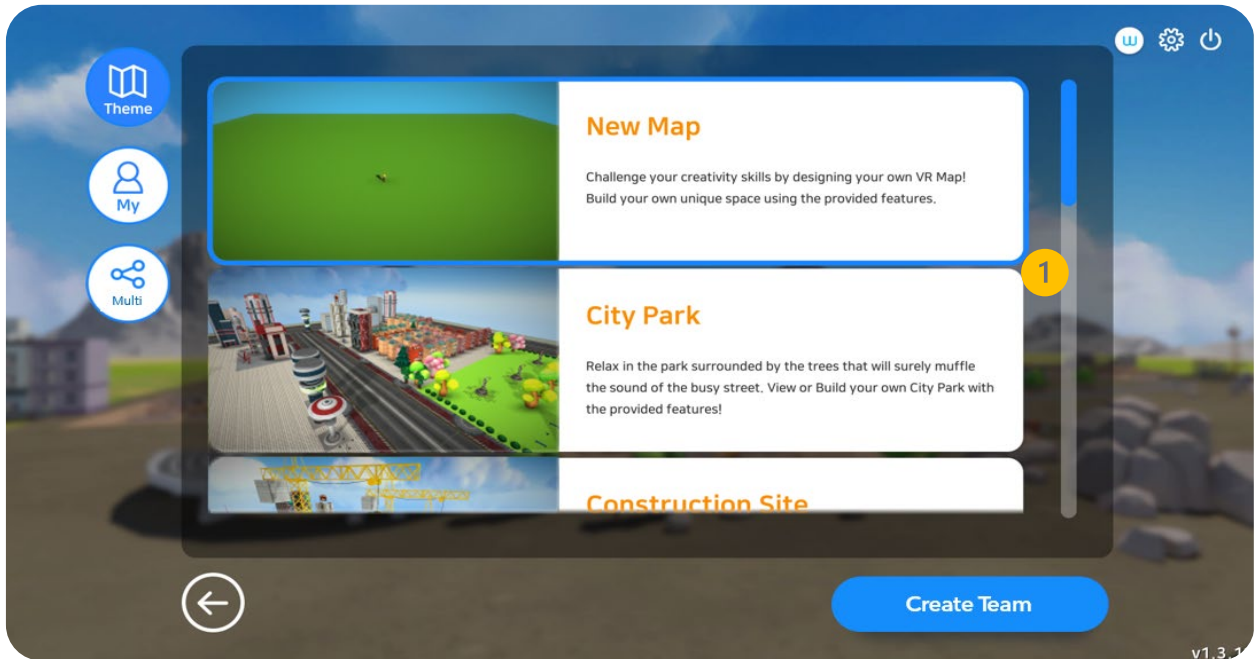
1. Map Entry

After selecting the VR map, click "play" button to start.

2. Select Character

Select your favorite character and click "play" button to start.

1. Waiting Room

Wait for the host in the waiting room after which, click start.
*Host will give access to other players.

5.4 Start

1. Player list

You can check the list of players currently logged in.

2. Text Chat

You can communicate by text with other users through the chat window.

3. Voice Chat

You can communicate with other users through the on/off voice function.
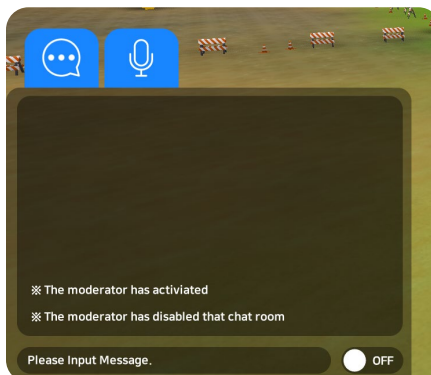
* Only the host can disable voice/text chat

VRWARE Edu School

CHAPTER 6

Coding

Coding Class

Coding Class

- VRWARE Coding helps improve its users logical thinking and creativity by applying block coding to character players (to control its movements) while exploring the virtual map.
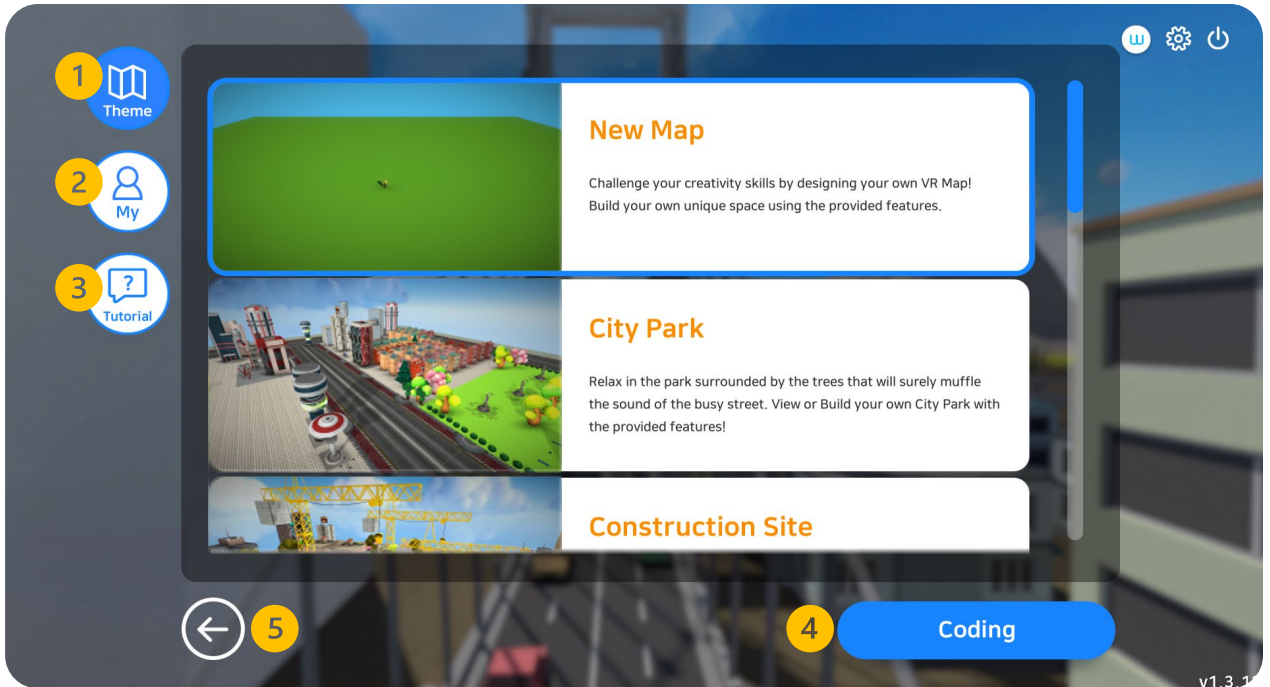

Virtual Map Coding

Block Coding Categories
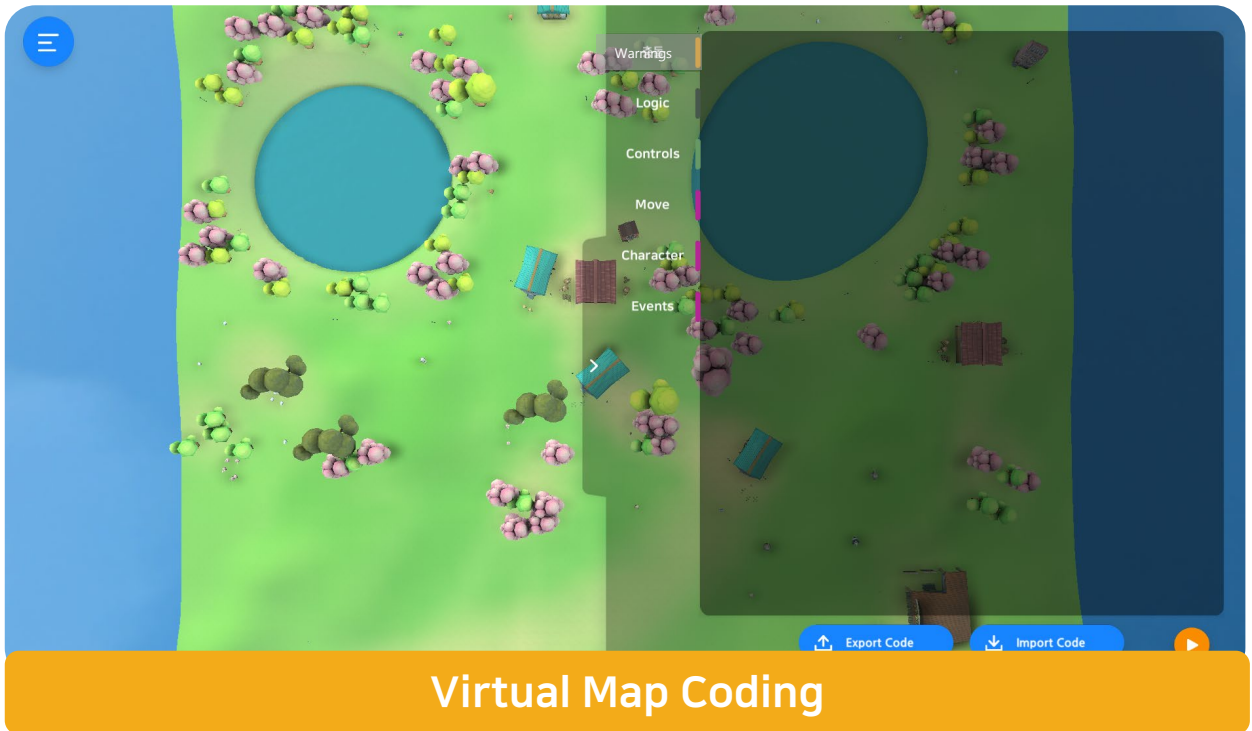
6.1 VR Coding Class
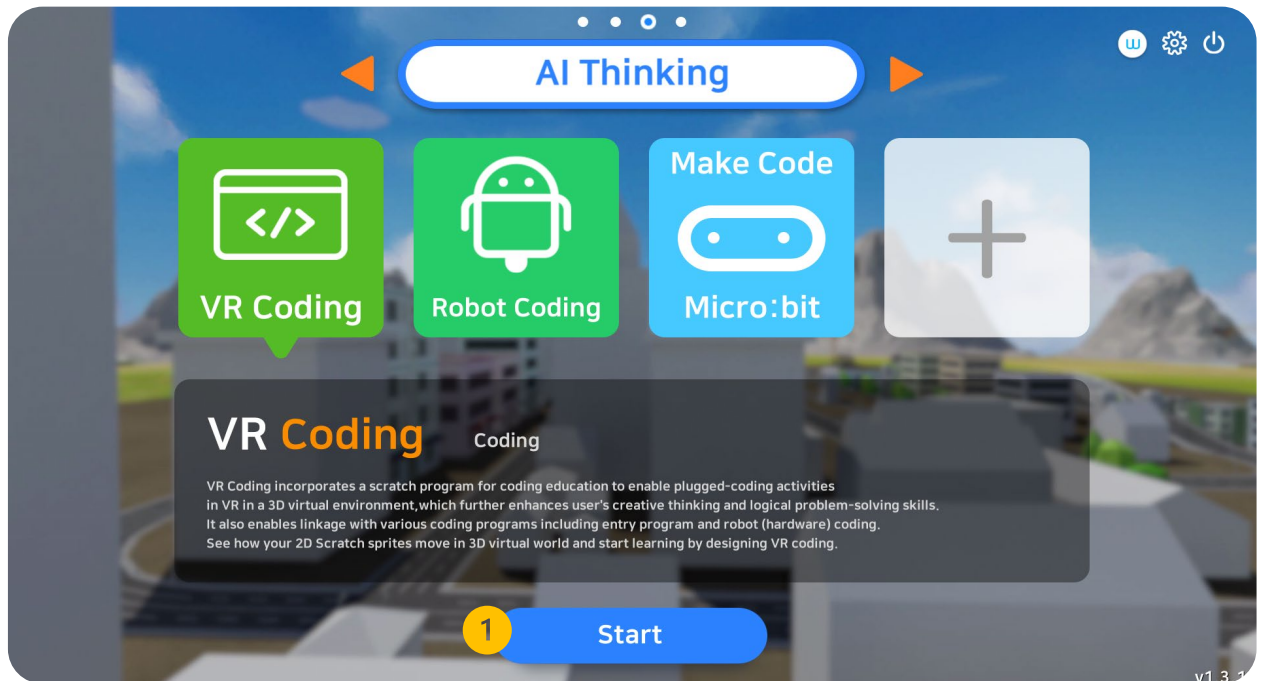
1. VR Coding (Let's Start!)

On the main menu of VRWARE Edu School, click the last image icon that reads

VR Coding.

6.2 Select Map

1. Theme Maps (Total of 12)

There are a total of 12 ready to explore map themes provided inside the software.
It is recommended for new users.

2. My Map

Lists of the VR maps created by the user

3. Select Map

Start coding in the map selected.

4. Coding

With your selected character player inside the map, start coding.

5. Go Back

Go to the main menu.

6.3 Start Coding
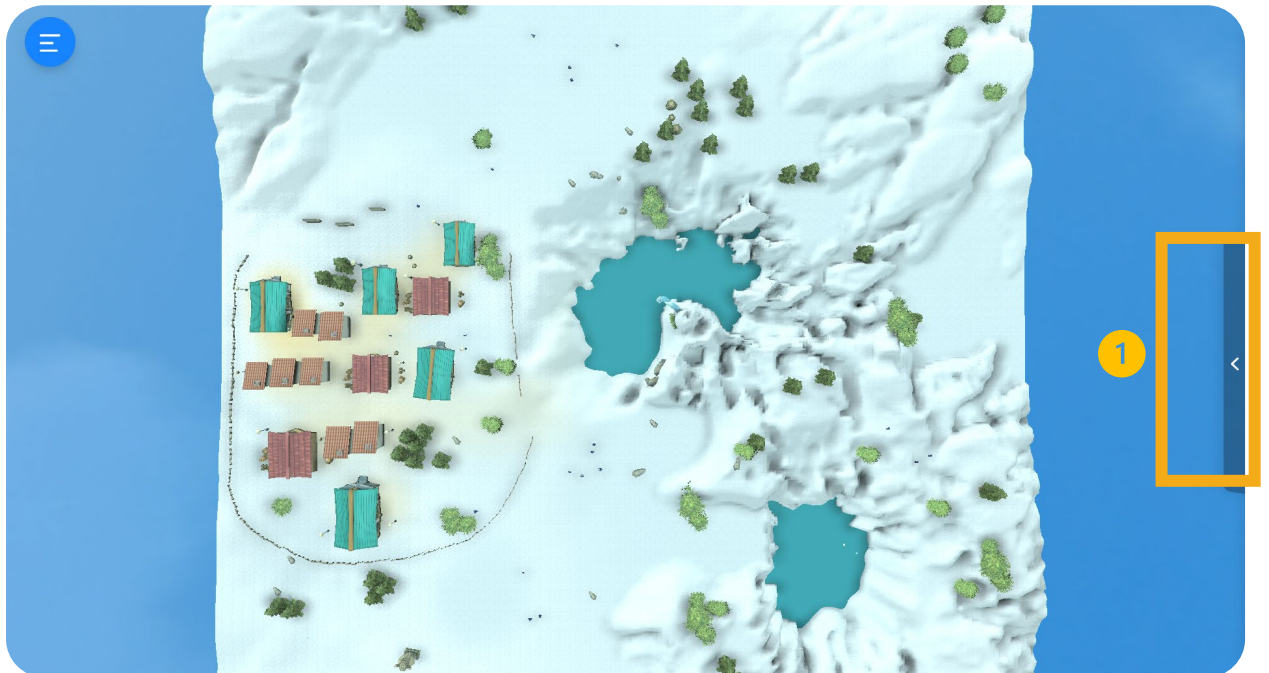
1. Coding

Click the icon located on the right-side corner to open block coding window.

2. Block Coding Window

Select block codes and start coding.

VRWARE Edu School Coding
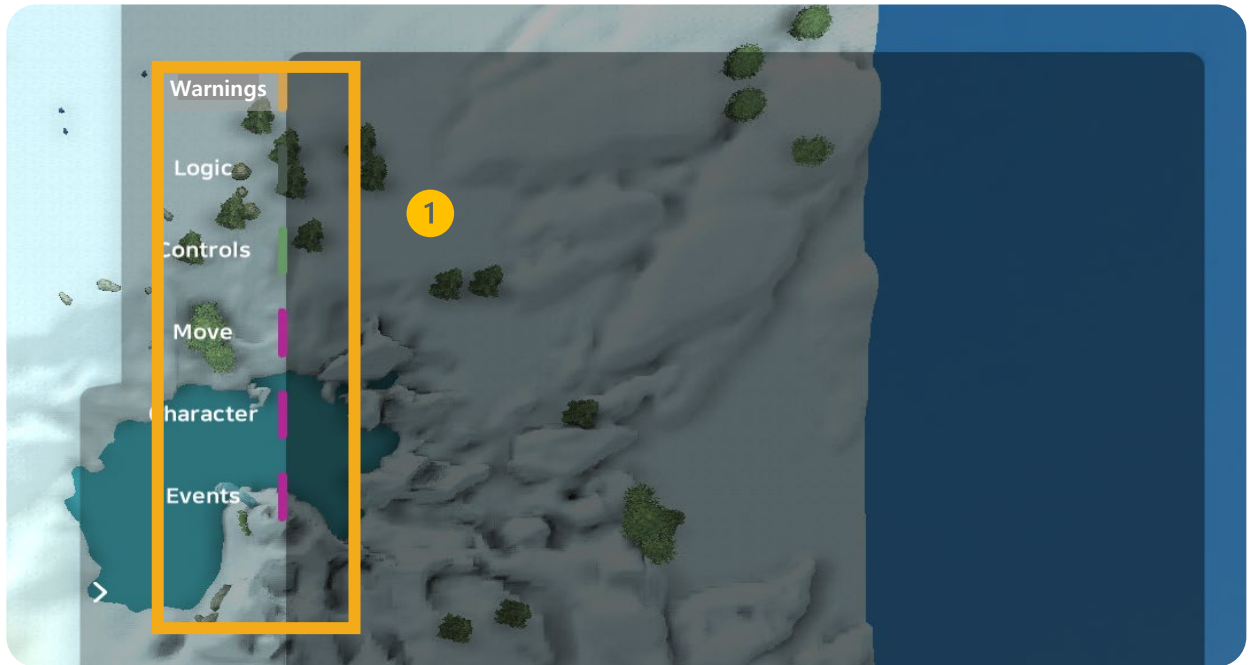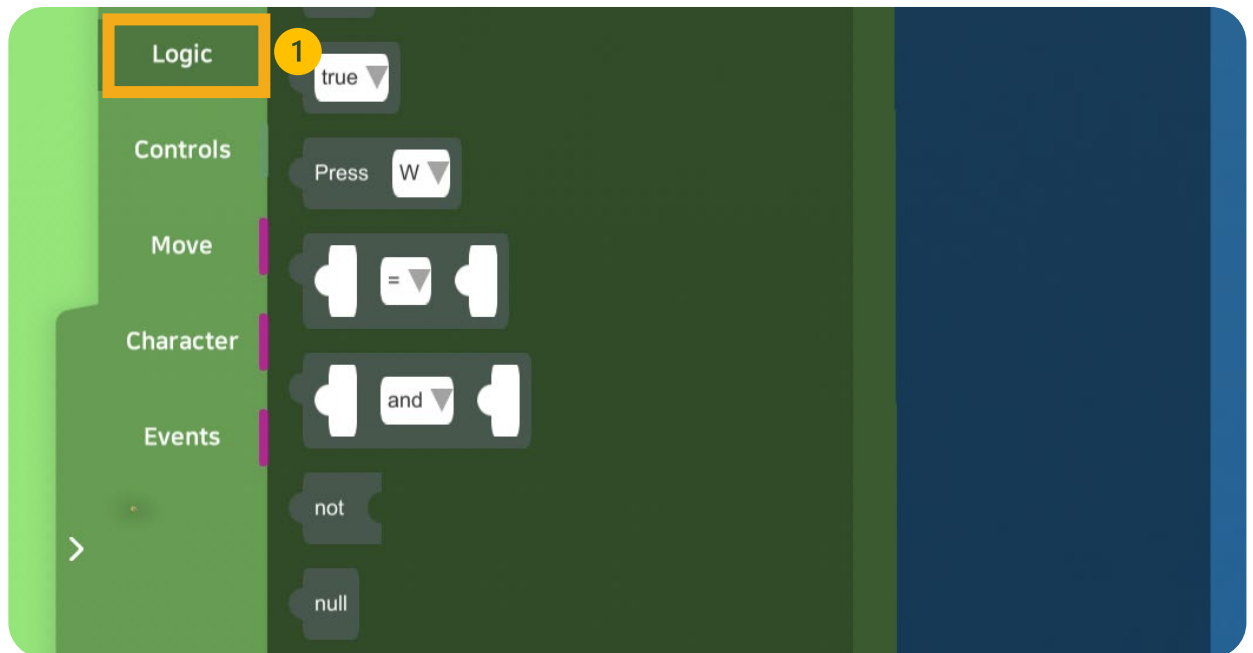

1. Select Category

There are a number of categories (logic, controls, movement, coroutine, etc.)
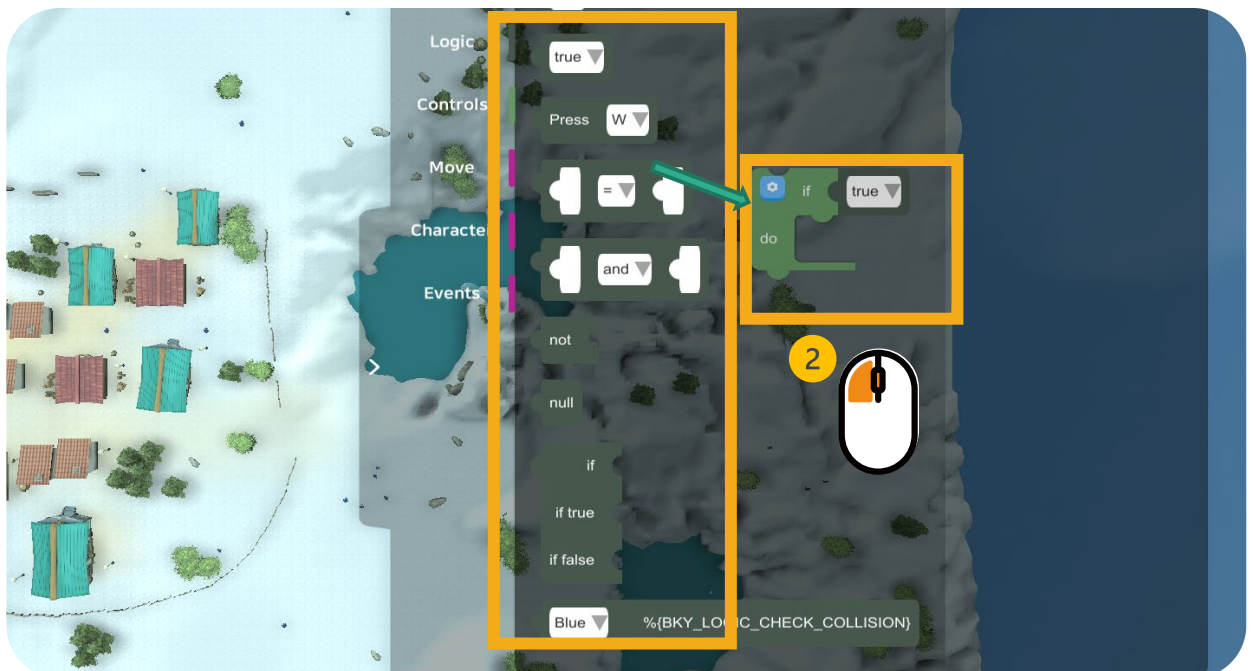
2. Match Codes

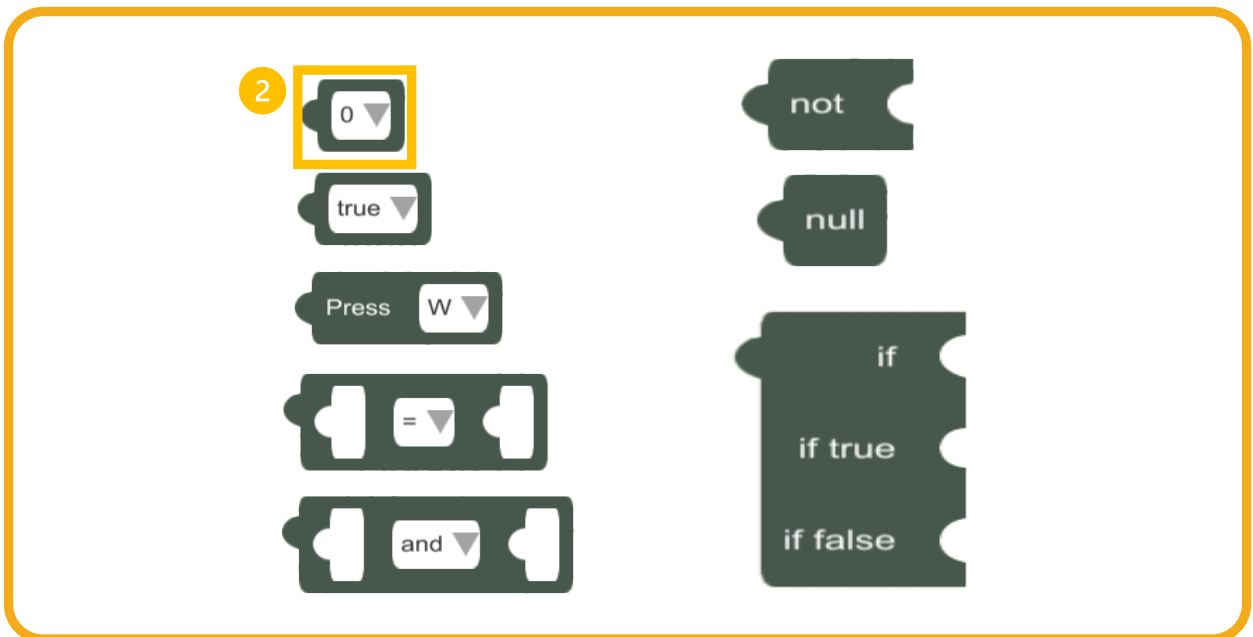Click the codes and drag them to the space provided.
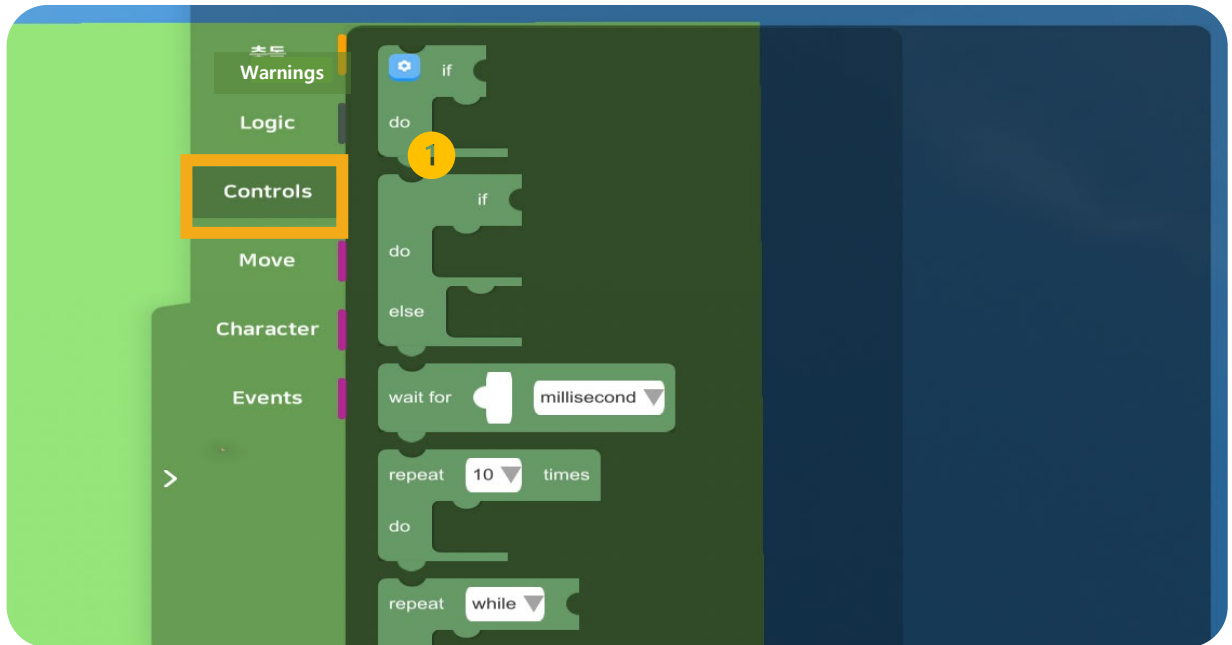
6.4 Coding Categories (Logic)

1. Logic Blocks

This block is used to set conditions according to user's choices.
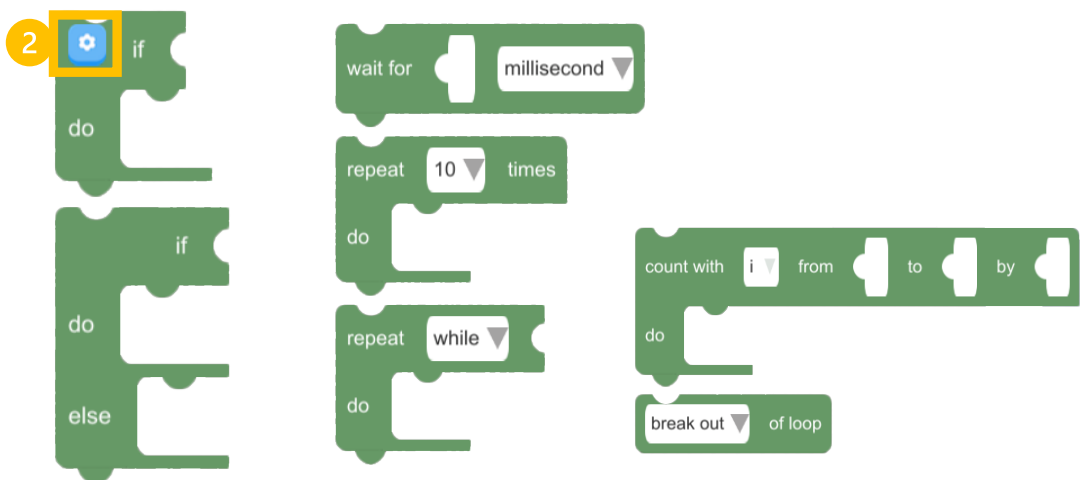

2. Additional Logic Blocks

Click the arrow icon as shown in the image to unlock more logic blocks.

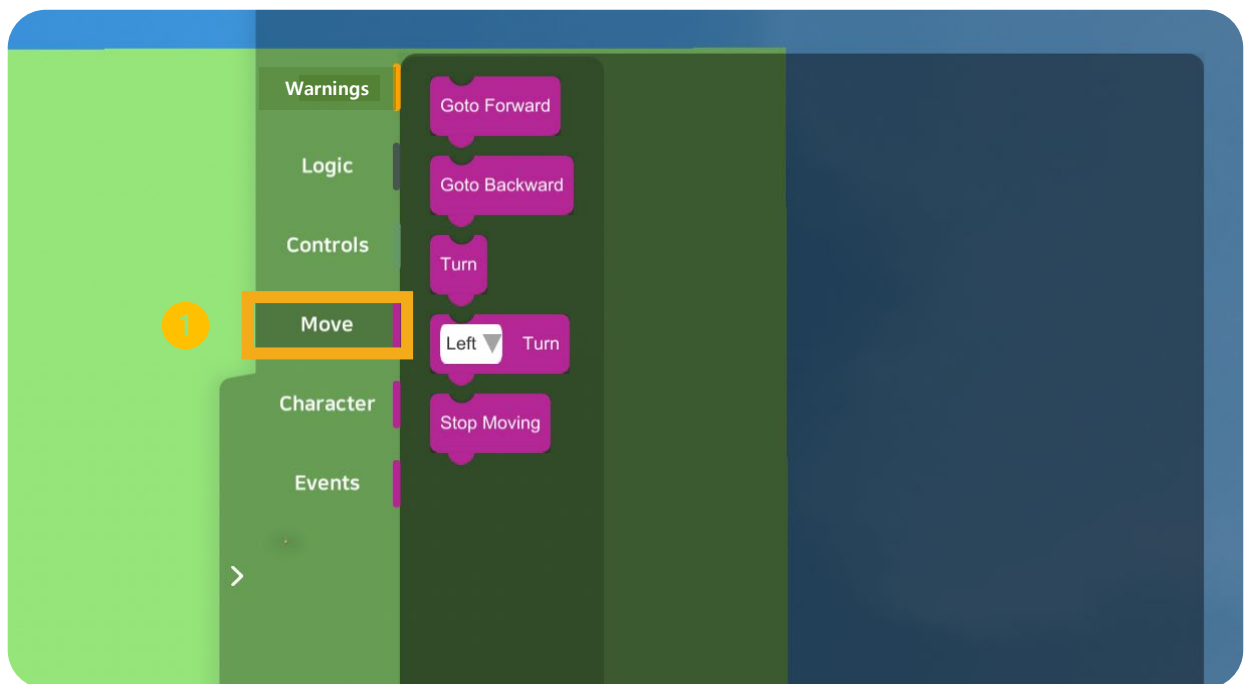# 6.4.1 Coding Category (Control)

1. Control Blocks

The function of theses blocks is to control the matched code by repeating and stopping it.

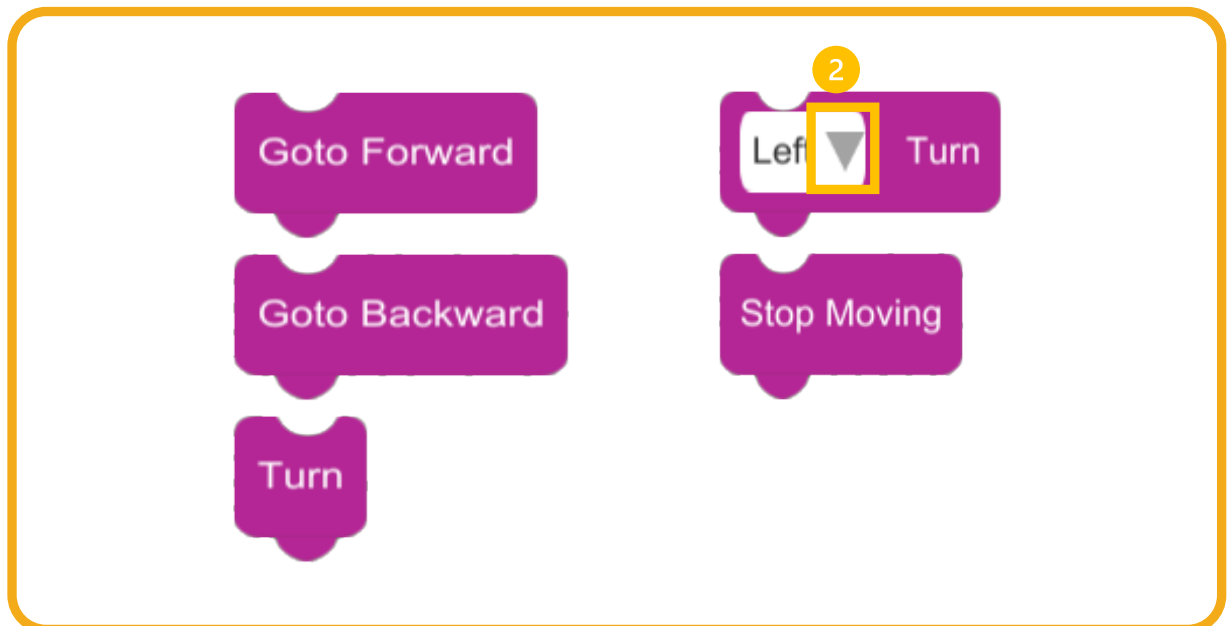## 2. Additional Control Blocks

Click the arrow icon as shown in the image to unlock more control blocks .

6.4.2 Coding Category (Motion)

1. Motion Blocks

Motions blocks functions as controller of the movements. E.g., forward, backward, right, left.
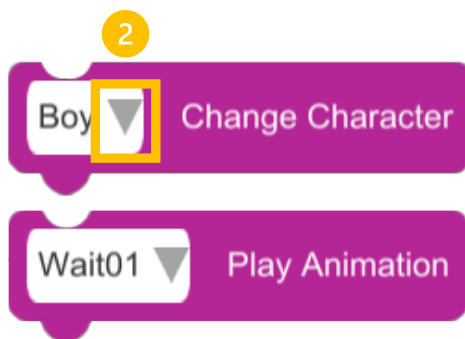

2. Additional Motion Blocks

Click the arrow as shown in the image to open more functions.

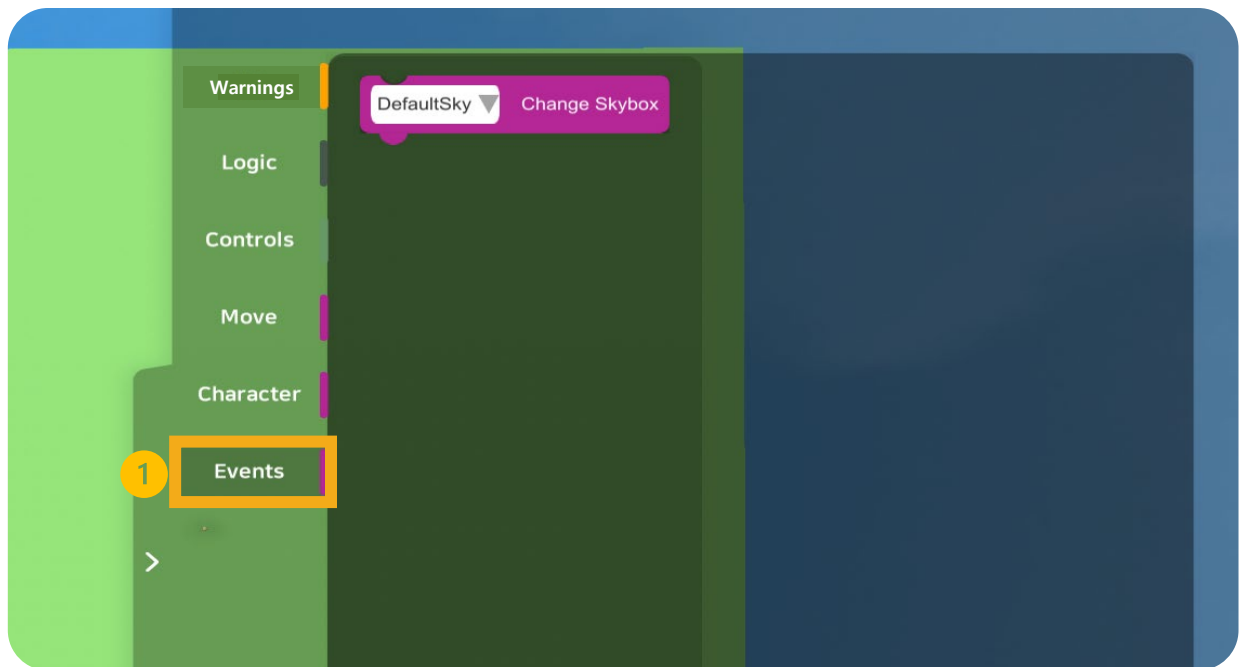# 6.4.3 Coding Category (Character)

1. Character Blocks

Character blocks functions include changing the character player or add animations.
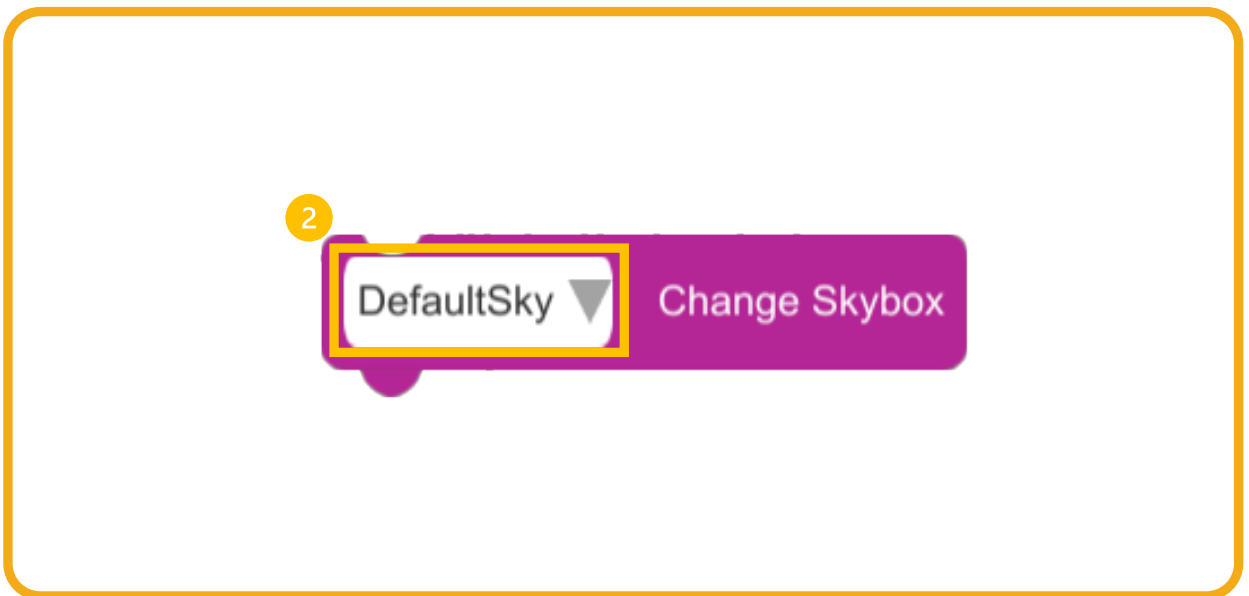

2. Additional Character Blocks

Click the arrow as shown in the image to open more functions.

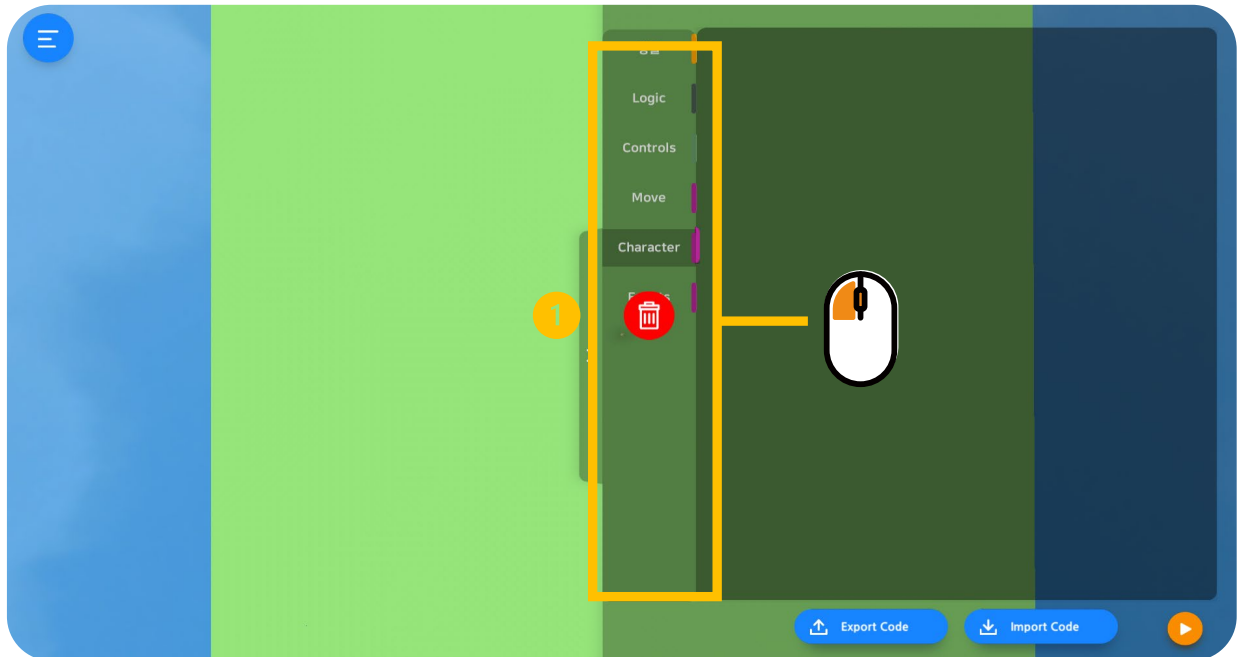# 6.4.4 Coding Category (Events)

1. Event Blocks

Event blocks allows to perform functions such as screenshots, recordings, and background changes.

2. Additional Event Blocks

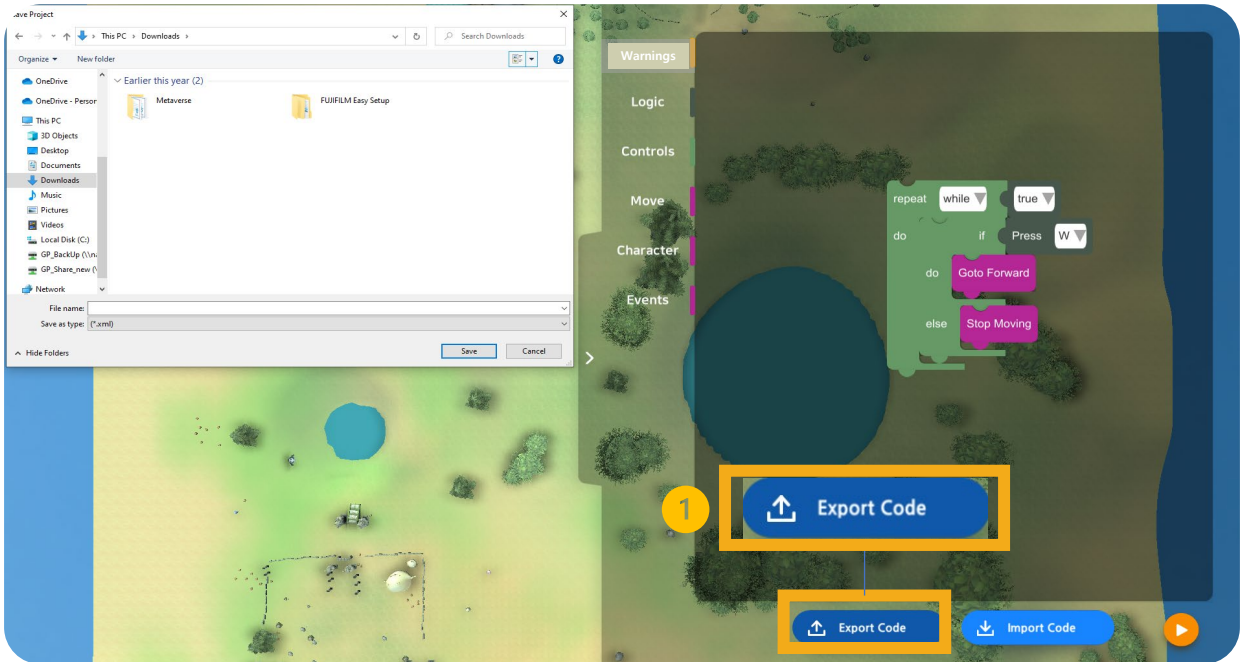Click the arrow as shown in the image to open more functions.

6.5 Delete Code

1. Delete Code

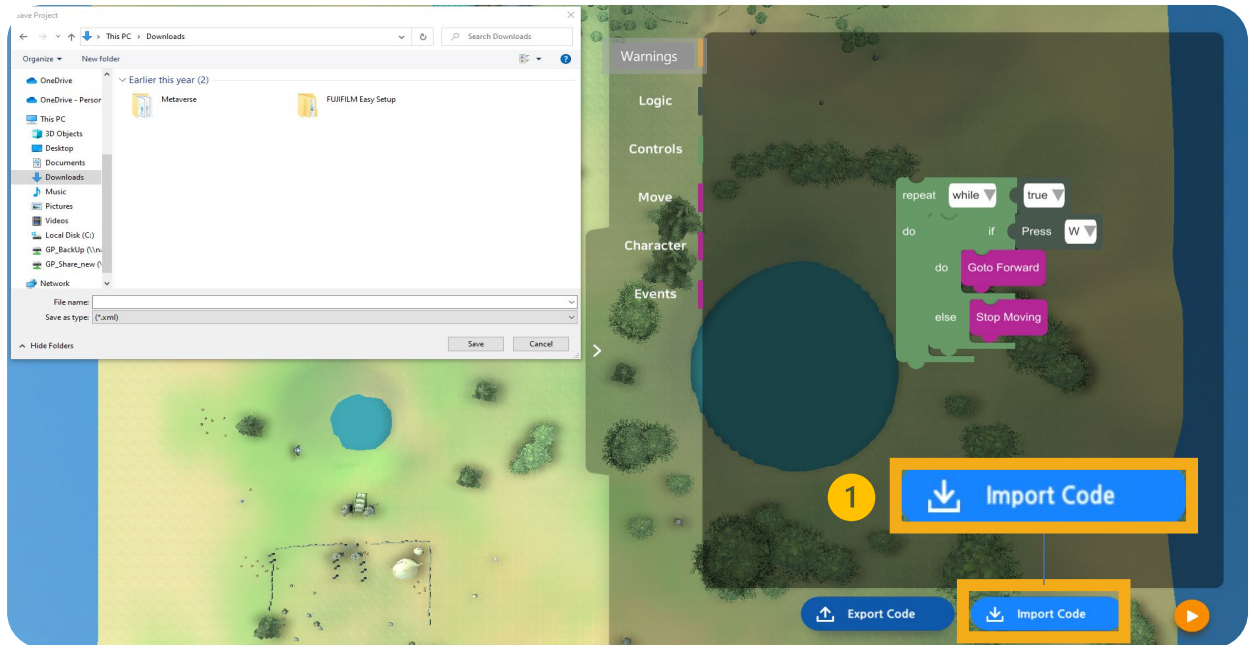Select the block code you want to eliminate and drag it to the left until the trash icon appears.

6.6 Export Code

1. Export Code

Click export code button and select folder to save.

6.7 Import Code

1. Import Code

Click the import icon and select.

VRWARE Edu School

CHAPTER 7

Add 3D Object

🎨 3D Illustration (An Introduction)

⇨ 3D Illustration is a program that lets users build and customize their own 2D and 3D objects. This program helps develop users' creativity skills.

⇨ With its easy functions everyone can use 3D Illustration.

⇨ Packed with various types of 3D models, shapes and images that the users can use to build or customize their own 3D objects.

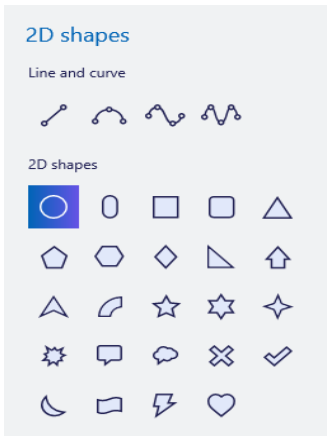# 1. 3D Illustration Features (Brushes)
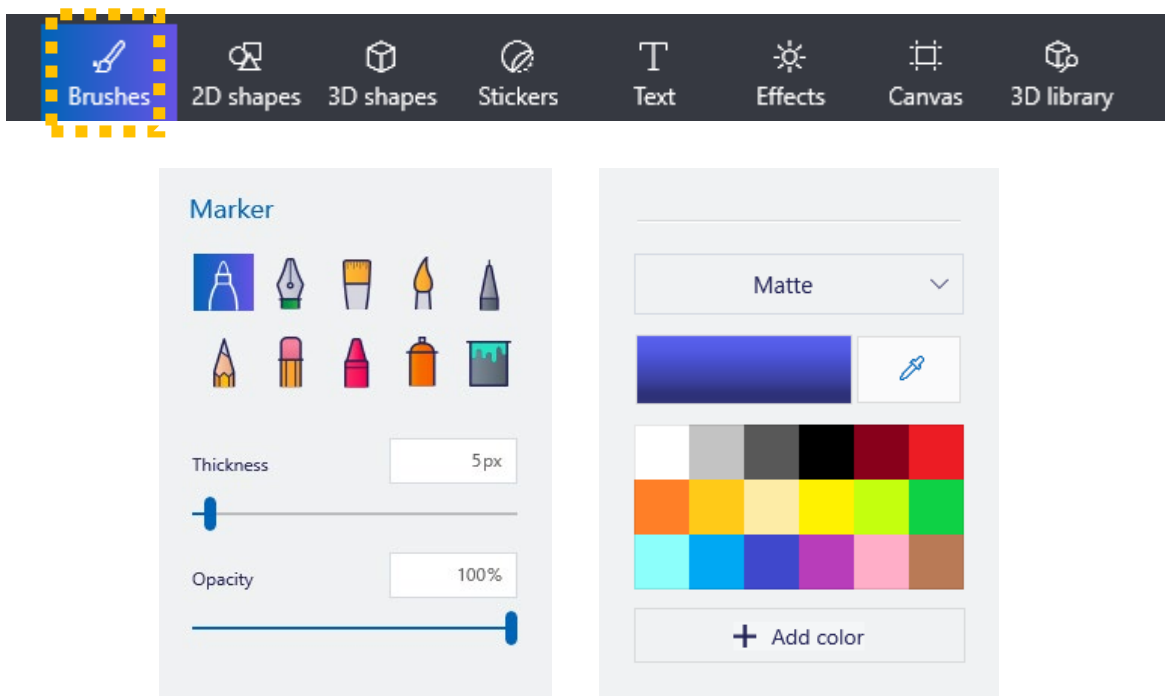
⇨ There are different kinds of brush types that the users may use to customize and build 3D objects.

⇨ Different color palettes are also provided so users can easily select their preferred colors on customizing their 3D models.
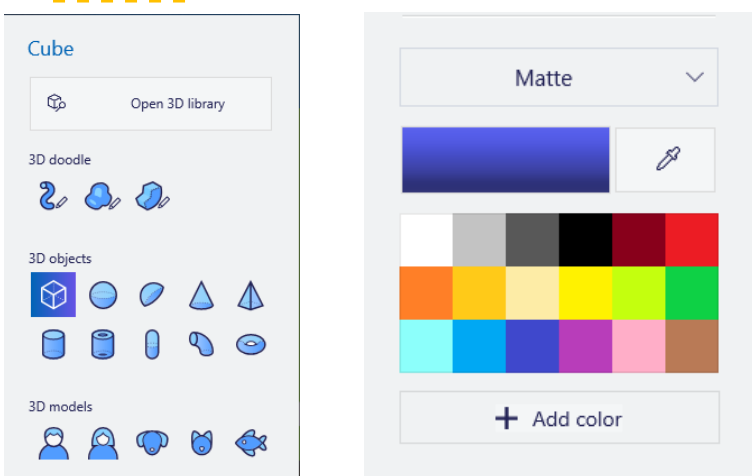
2. 3D Illustration Features (2D Shapes)

⇨ Several types of 2D shapes are provided, allowing an easy selection for users.

⇨ You can easily customize each selected shape. Just click on the image and the customizing window will automatically appear.

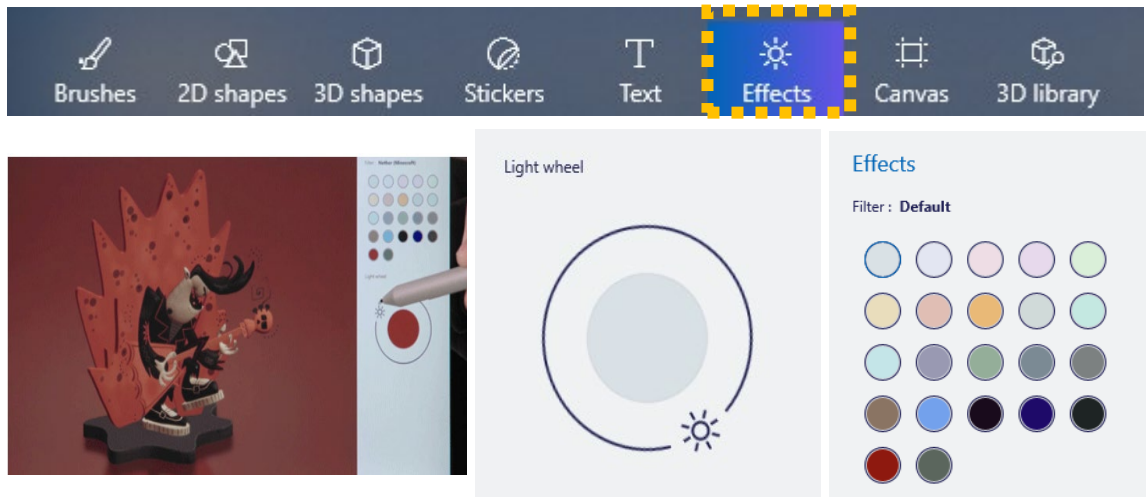# 3. 3D Illustration Features (3D Shapes)

⇨ With "3D Shape" tool users can easily access 3D shapes provided.

⇨ 3D Illustration also allows functions that turn 2D images into 3D images. As well as turn 3D images into 2D images.

⇨ Additionally, it also includes a feature where users can scribble any shapes then turn those into a 3D model.

4. 3D Illustration Features (Effects)

⇨ Users can add effects into their 2D and 3D models. Some effects include filters for the images.

⇨ This feature also includes a function to adjust the lighting of the images.

5. 3D Illustration Features (Library)
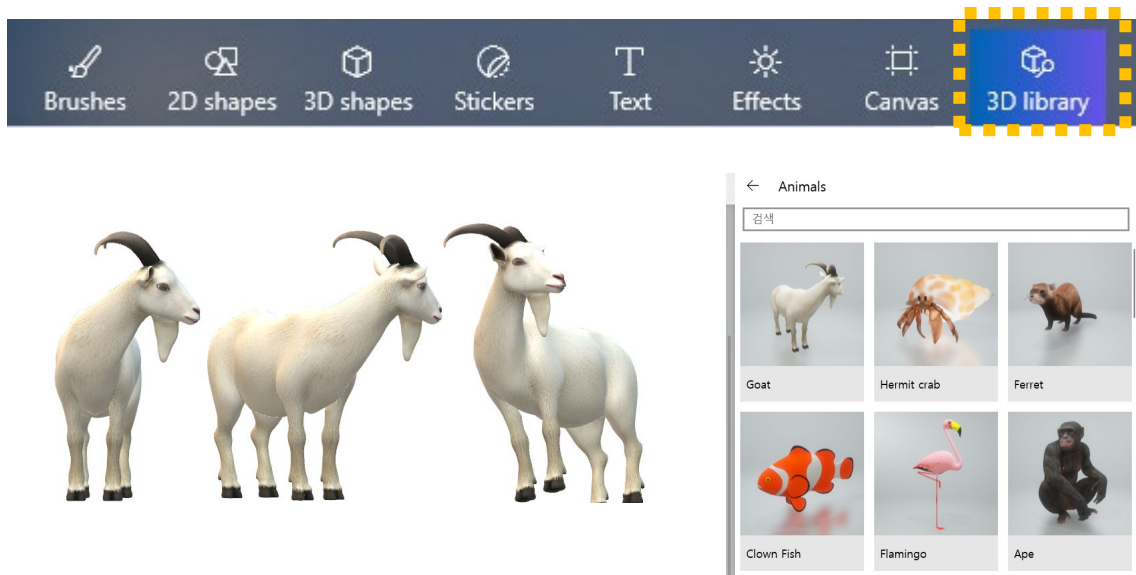
⇨ The program also features free to use 3D modelling and customization of the images / models.

⇨ Users can select 3D characters provided in the library as shown in the image and customize them based on their preferences.

⇨ Users can also upload 3D models to edit and customize them.

6. 3D Illustration Features (Others)

⇨ **Magic Select** is a tool where users can select a certain part of the image and customize it.
- Select and cut certain part of an image and attach it to another image with a different background or,
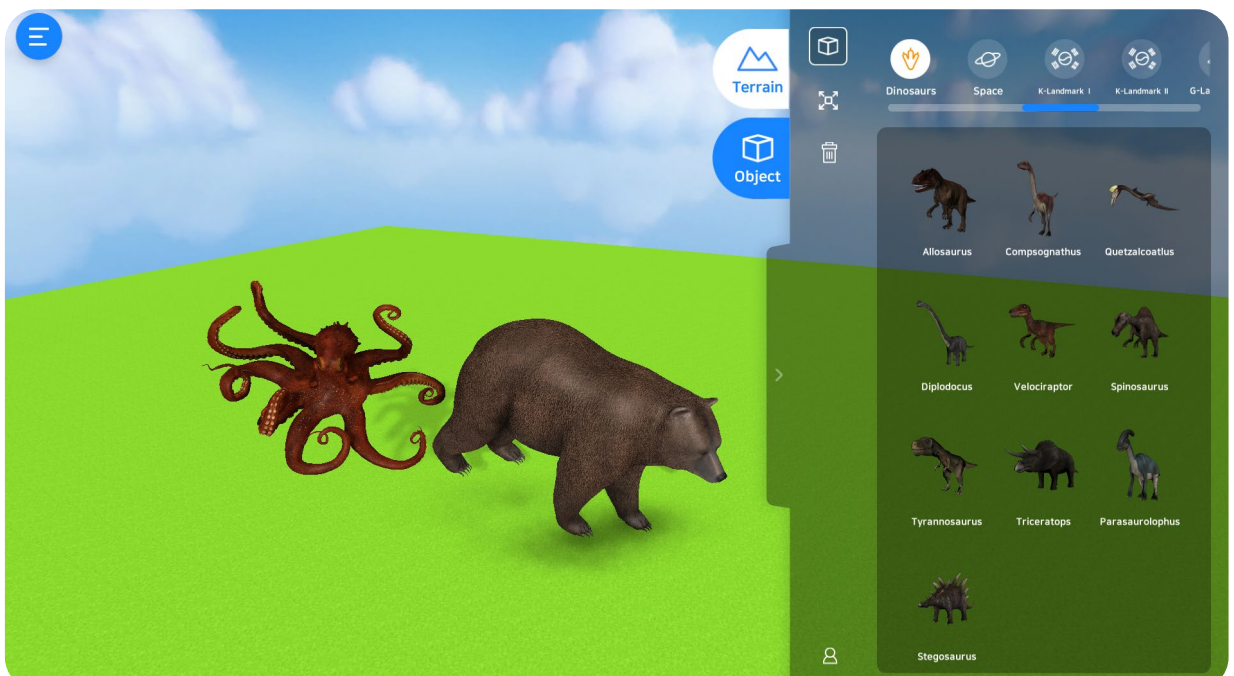- Just simply change the background while leaving a part of an image.

🖌️ 3D Object

⇨ 3D Object allows users to build of design their own 3D models and add it inside the virtual reality map. They will be able to view the 3D characters while exploring the map.
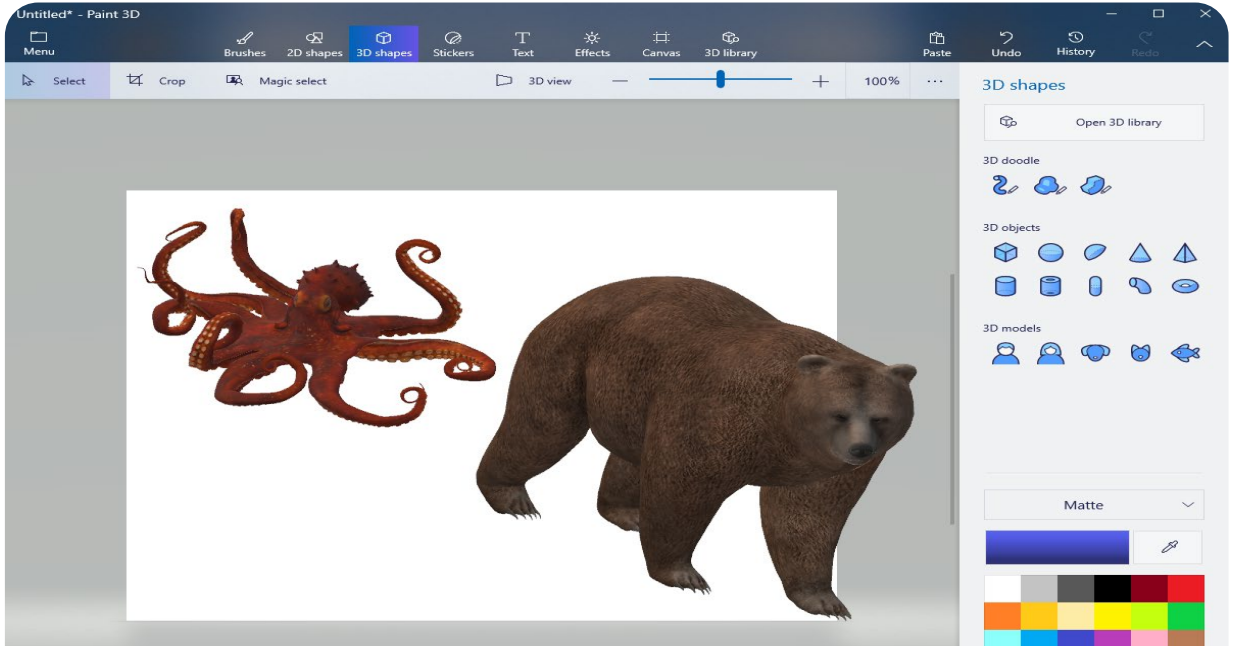
3D Illustration Library

Adding 3D Object
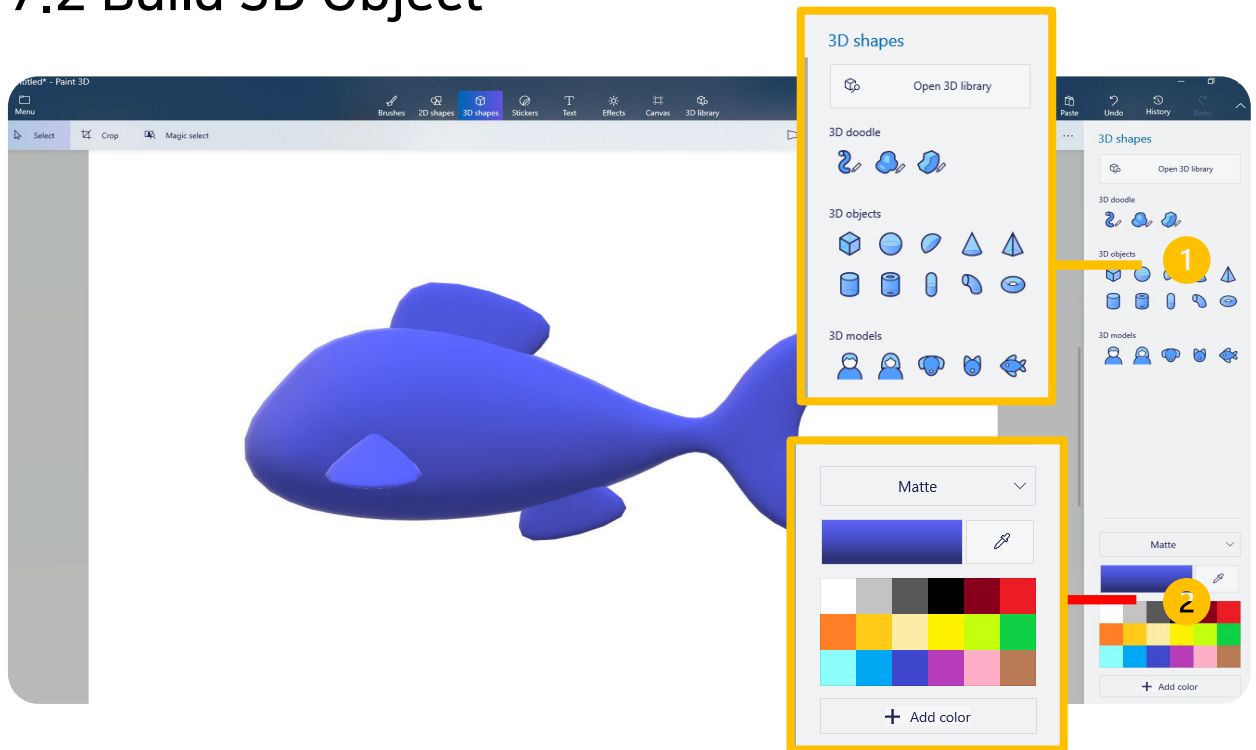
7.1 3D Object (How to Start?)

1. 3D Object

On the main menu under the design thinking category, click VR Object.

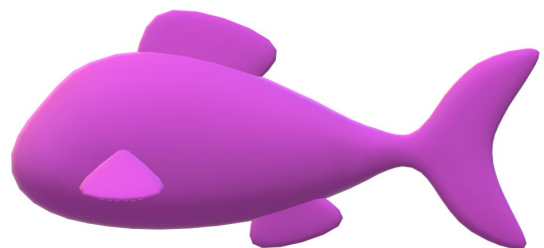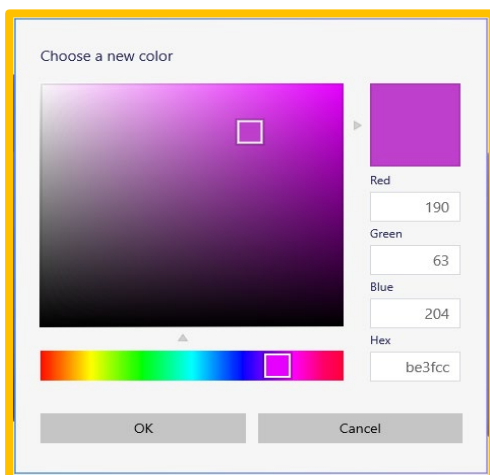* This program is only available for windows 10 of higher.
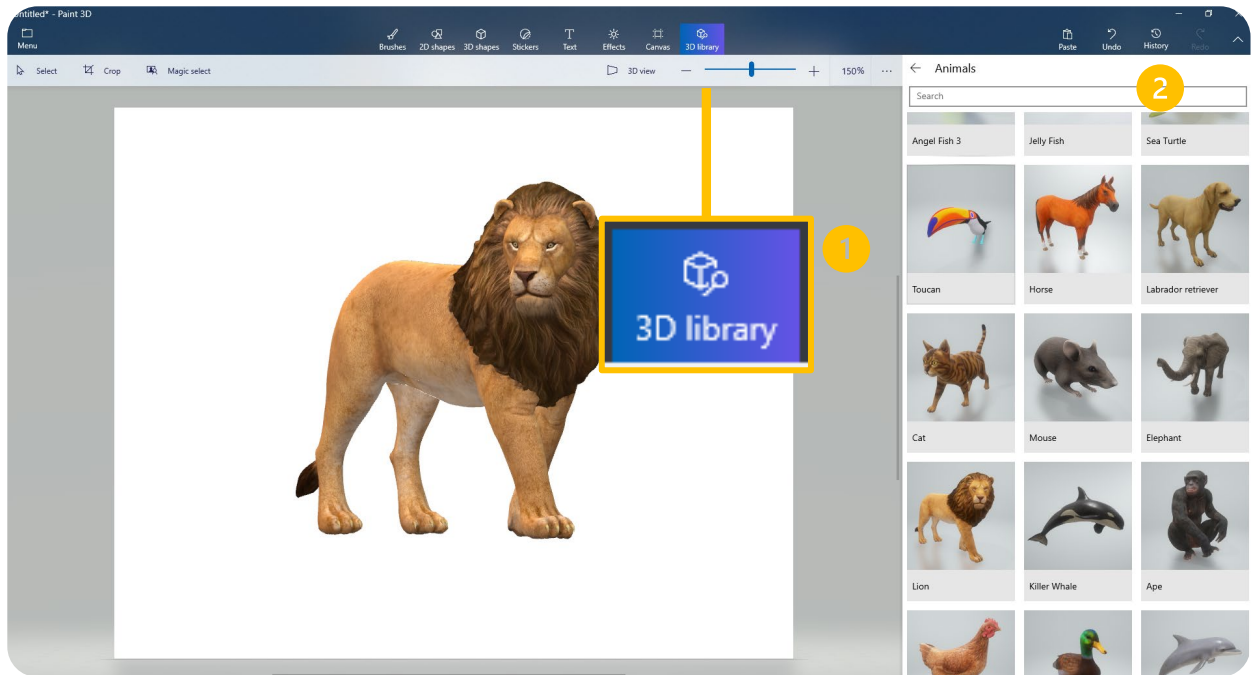
7.2 Build 3D Object

1. Build 3D Object

Users can use the tools provided such as 3D drawing, object, and model.

2. 3D Object Color

Various selection of colors is provided. When set to default, users can change the object's color. If the colors shown is not available, click add color.
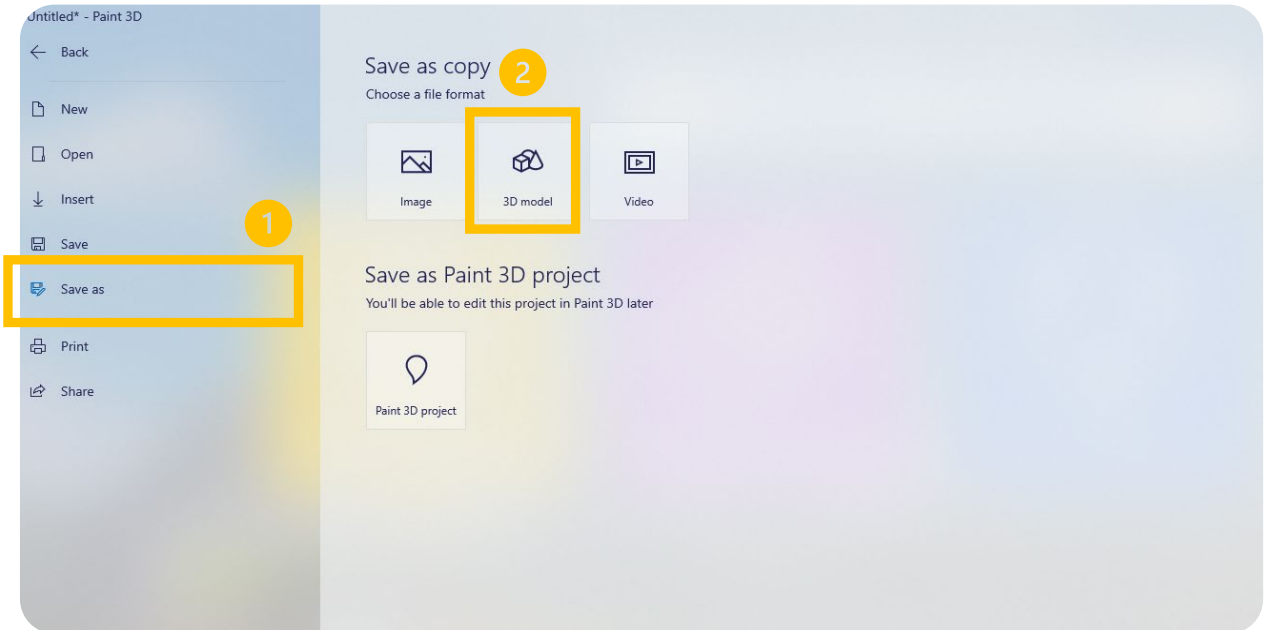
VRWARE Edu School 3D Object

1. 3D Library

Several numbers of 3D models divided into categories are available. Users can just simply click on the object, customize it and add it inside the VR map.

2. Search

Search for a specific 3D object you prefer. Provide keyword on the search box.

7.3 Save 3D Object

1. Save as

After customizing you own 3D model, save it in your library.

2. 3D Model

Click the 3D Model button as shown in the image to save.

*3D models should be saved on glb format.

7.4 Upload 3D Object

1. Add 3D Object

Click the plus icon as shown above in the image to add 3D Objects inside the map.

2. Add Object

On the left right corner, click the plus icon again to upload your 3D object.
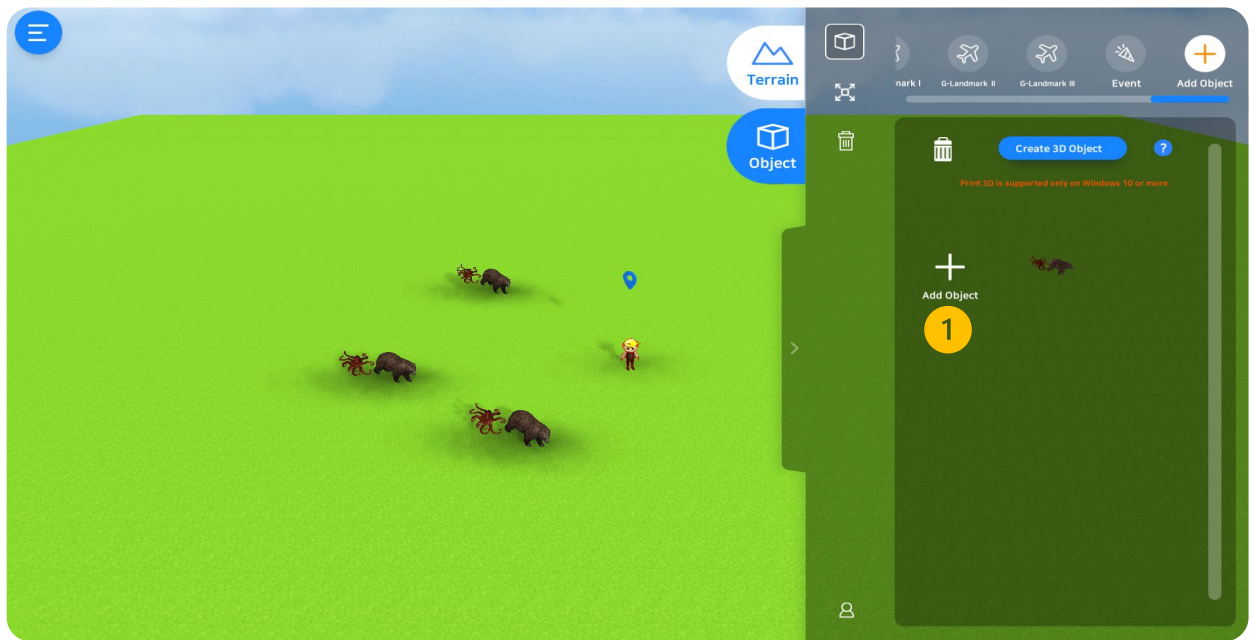
3. Select Object

Select the 3D object saved in your library and click "open" button.

4. Build 3D Object

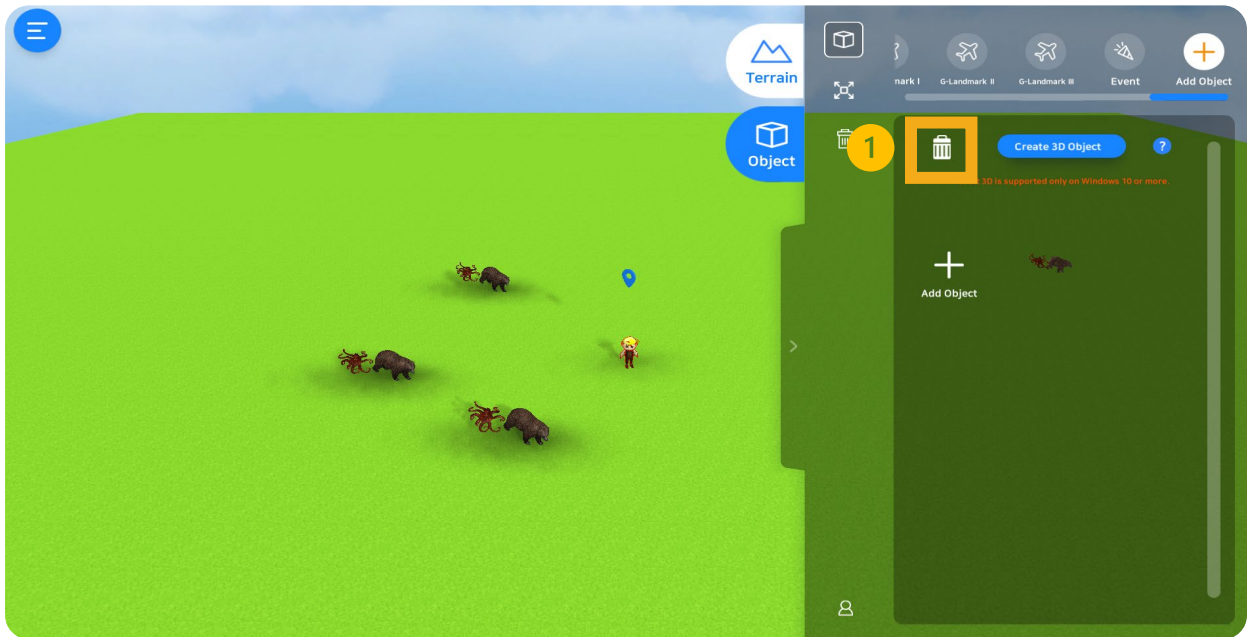By Clicking "Build 3D Object" users will be connected to 3D Illustration.

VRWARE Edu School 3D Object

1. Add Object

Click the uploaded 3D model and add it inside the map.

7.5 Delete 3D Object

1. Delete Object

Select the object then click the trash icon located above to delete.

7.6 3D Object More Details

1. Version

3D Illustration is available on Windows 10 or higher.

2. File Size

Uploaded file should not exceed to 30MB.
Maximum number of uploaded files is 50 items.
Total size of all uploaded files is limited to 100 MB.

3. Save

Name your file using English alphabets and it should include numbers as well.

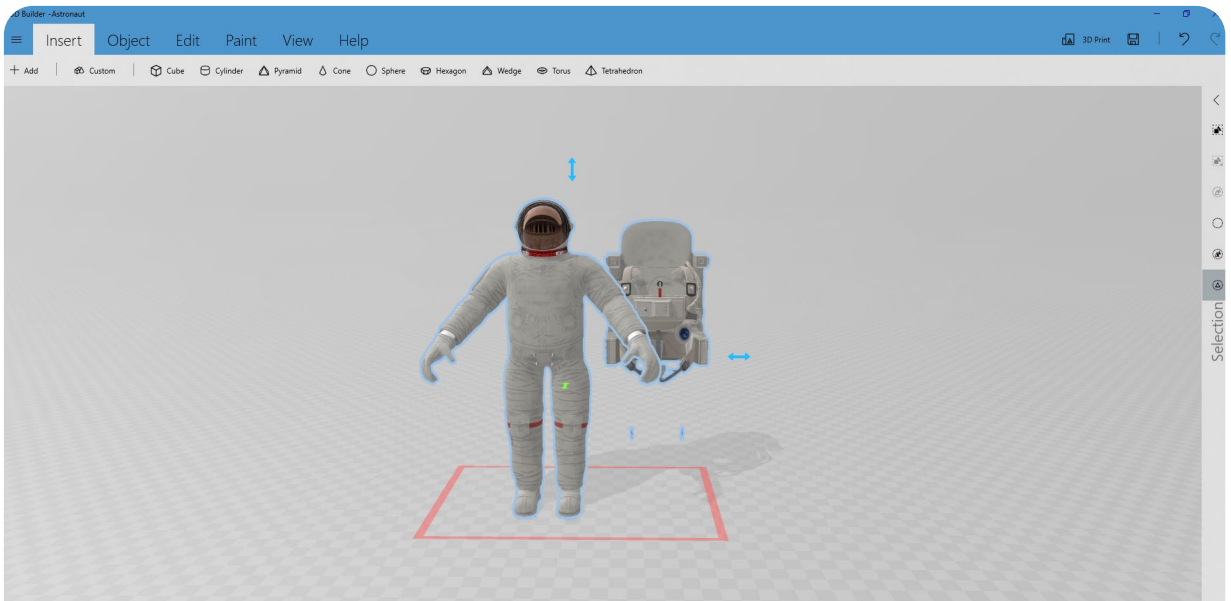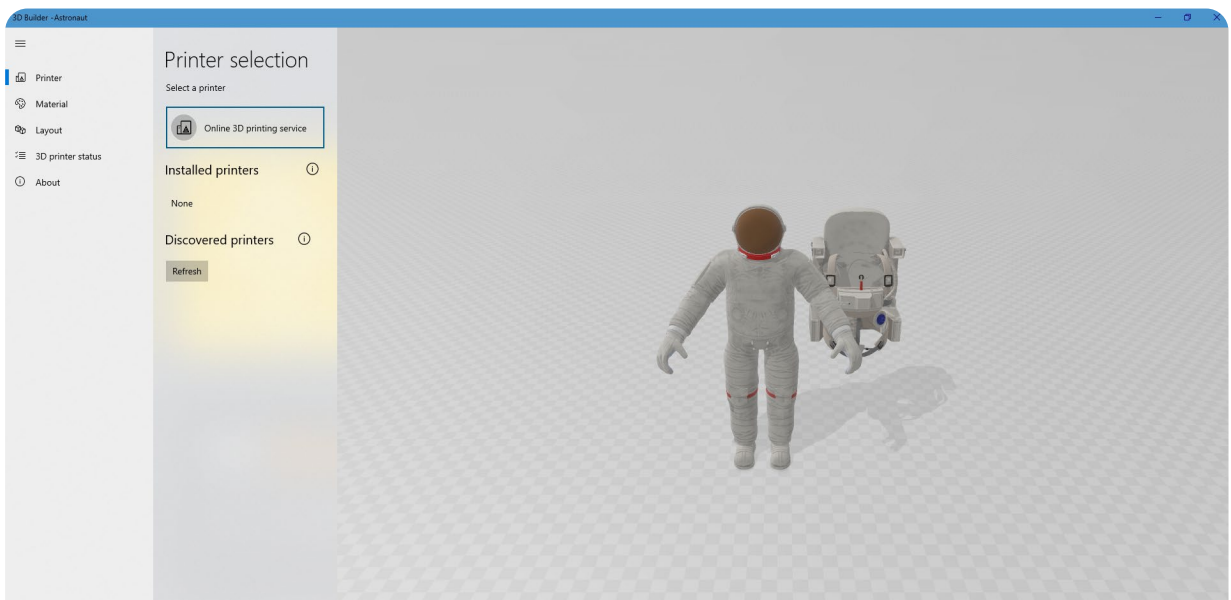# VRWARE Edu School

CHAPTER 8

3D Builder

3D Builder

3D Builder

⇨ 3D Builder is a free tool/ program that lets users design their own 3D models, customize them, or prepare them for 3D printing.

⇨ It allows users to add an object or images from their computer and with the tools provided, custom the shape and alter the images.

3D Builder Library

Customized Model (3D Print)
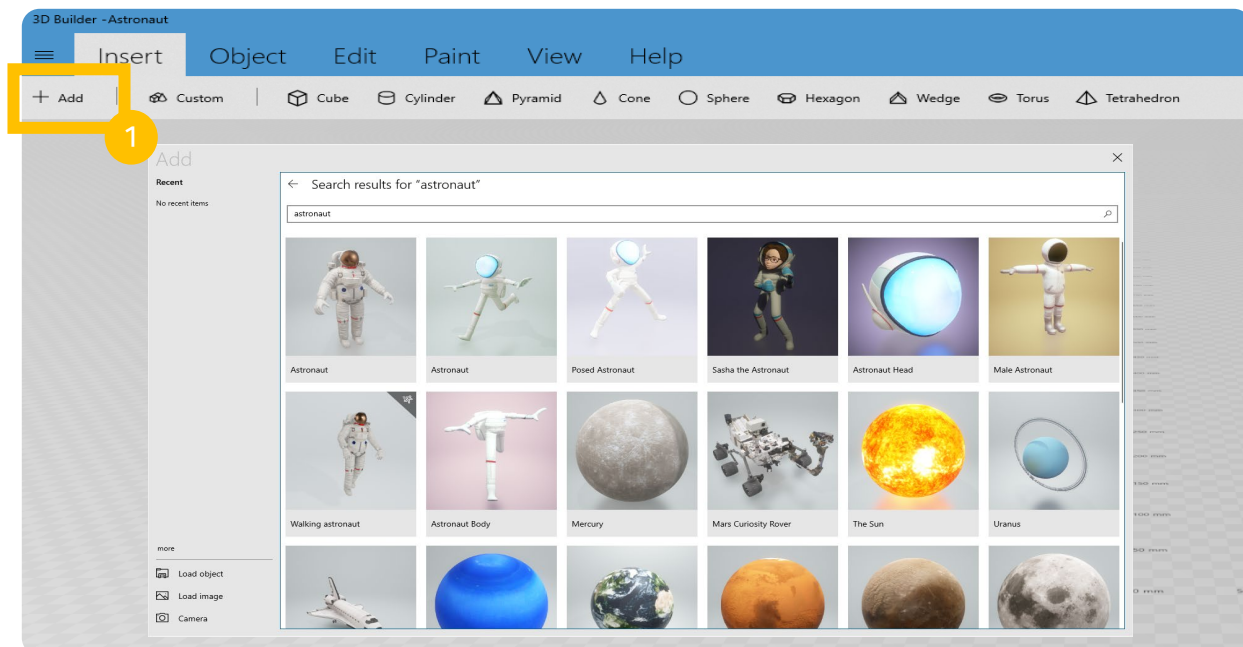
8.1 3D Builder : How to Start?

1. 3D Builder

On the main page under design thinking category, select 3D Builder icon and click start.
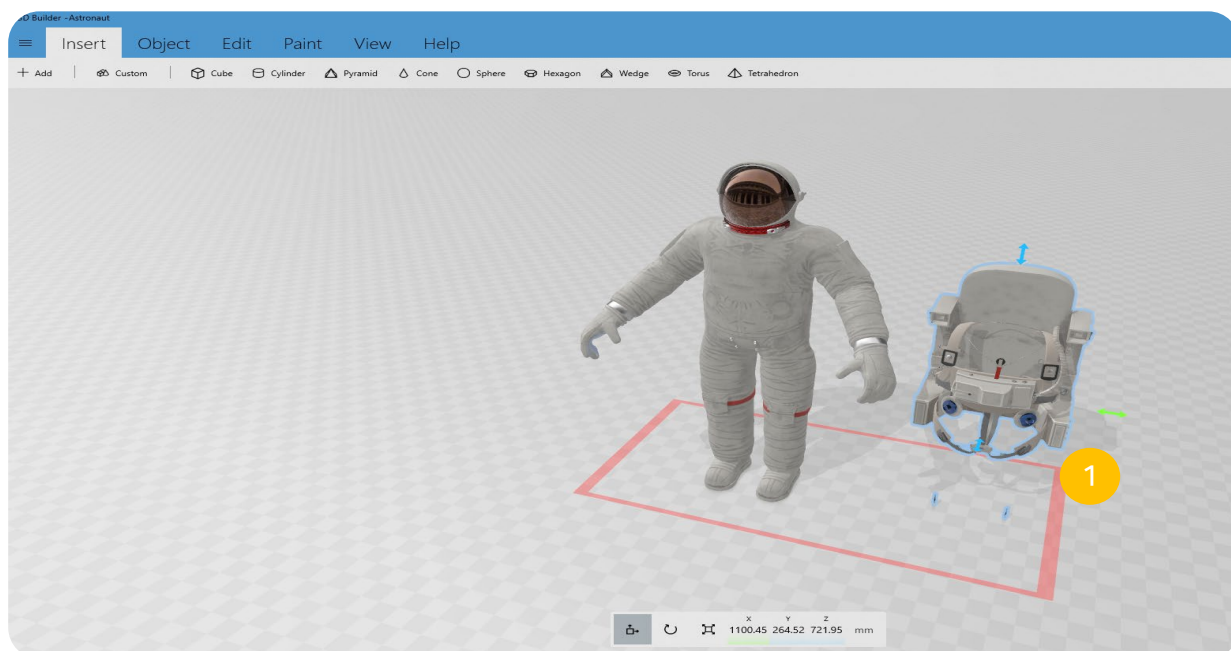
* 3D Builder is available on Windows 10 or higher.

8.2 3D Builder: Build a Model
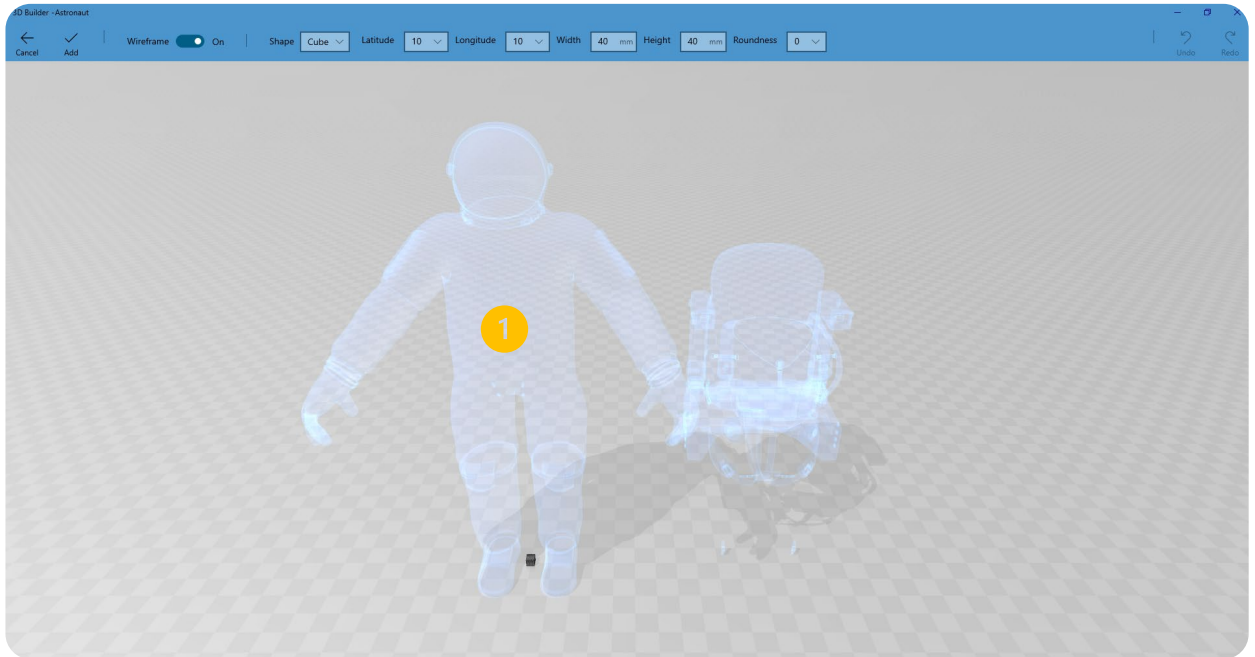

1. Select 3D Model

On 3D Builder window, click the plus icon to select models available in the library.
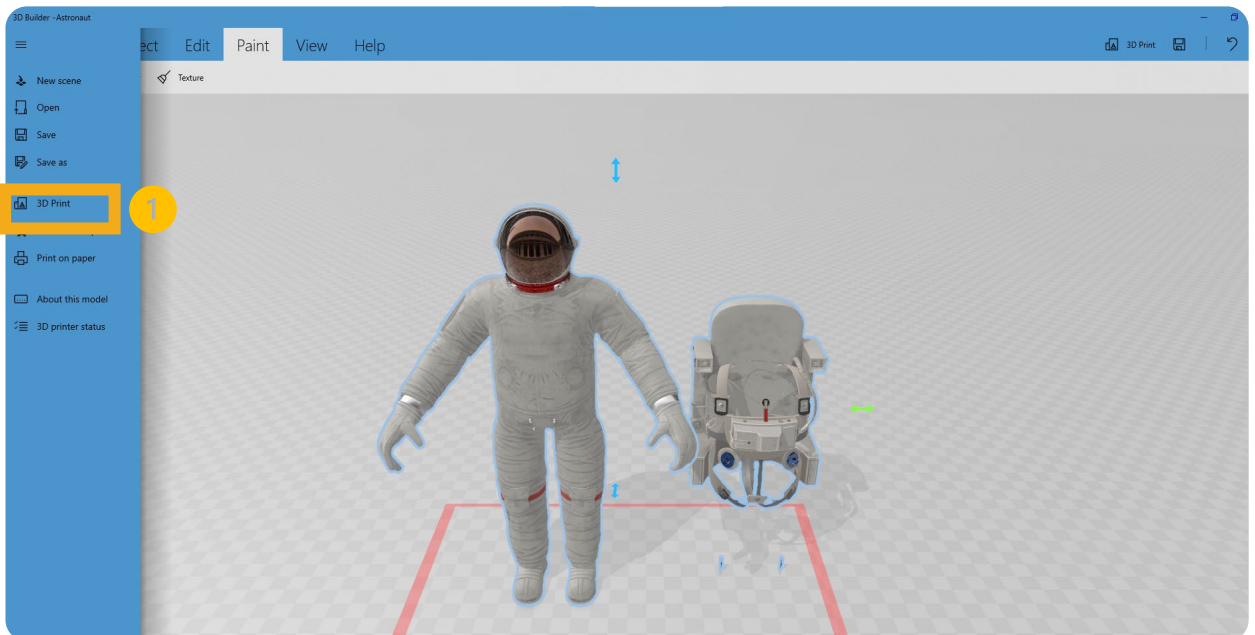

1. Ungroup Object

Ungroup some parts of the 3D Object to easily edit the model.

VRWARE Edu School 3D Builder

1. Select Color

Change default color with preferred color for 3D model.

1. 3D Print

After building or customizing your 3D Object, prepare for printing.

VRWARE Edu School
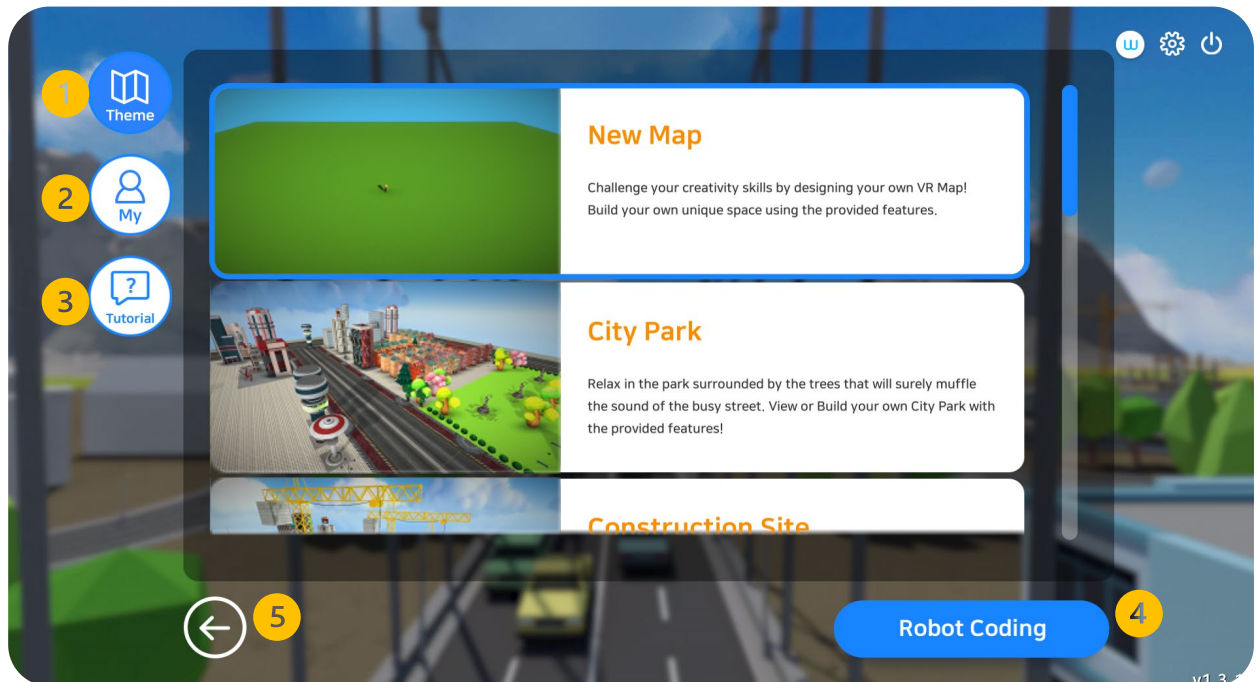
CHAPTER 9

Robot Coding

9.1 Robot Coding: How to Start

1. Robot Coding

On the main menu under AI Thinking category, select Robot Coding and click the start button.

9.2 Select Map

1. Map Themes (Total of 12 Maps)

There are a total of 12 ready to explore map themes available in the VRWARE Edu school. This map themes are especially for first time users.

2. My Map

List of maps created and designed by users.

3. Select Map

Select map you want to explore and you want to add robot coding to.

4. Coding

Click to create codes inside the VR map.
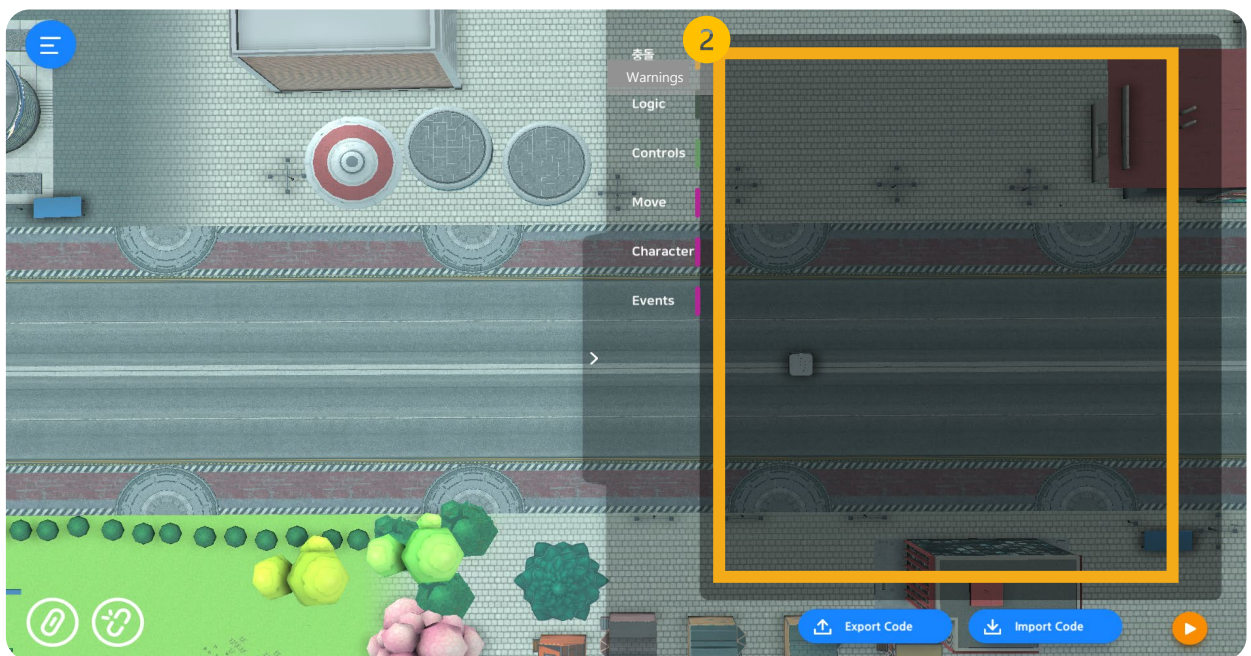
5. Go Back

Go to the main menu.
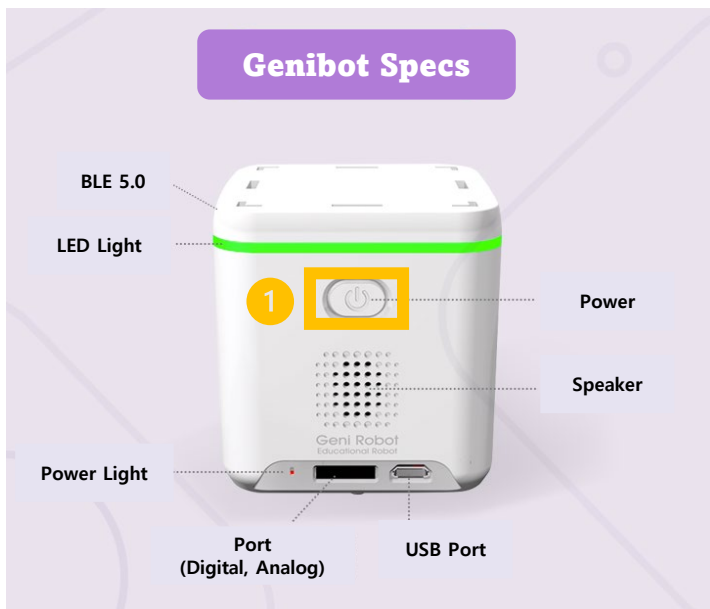
9.3 Connection to Smart Tools

1. Start Coding

Click the arrow icon as shown in the images to view block codes.

2. Block Codes

Select and match block codes.

VRWARE Edu School Robot Coding

Genibot Specs

BLE 5.0
LED Light
1
Power
Speaker
Power Light
Port
(Digital, Analog)
USB Port

Geni Robot
Educational Robot

*Bluetooth dongle should be connected to PC. MDBT50Q-RX
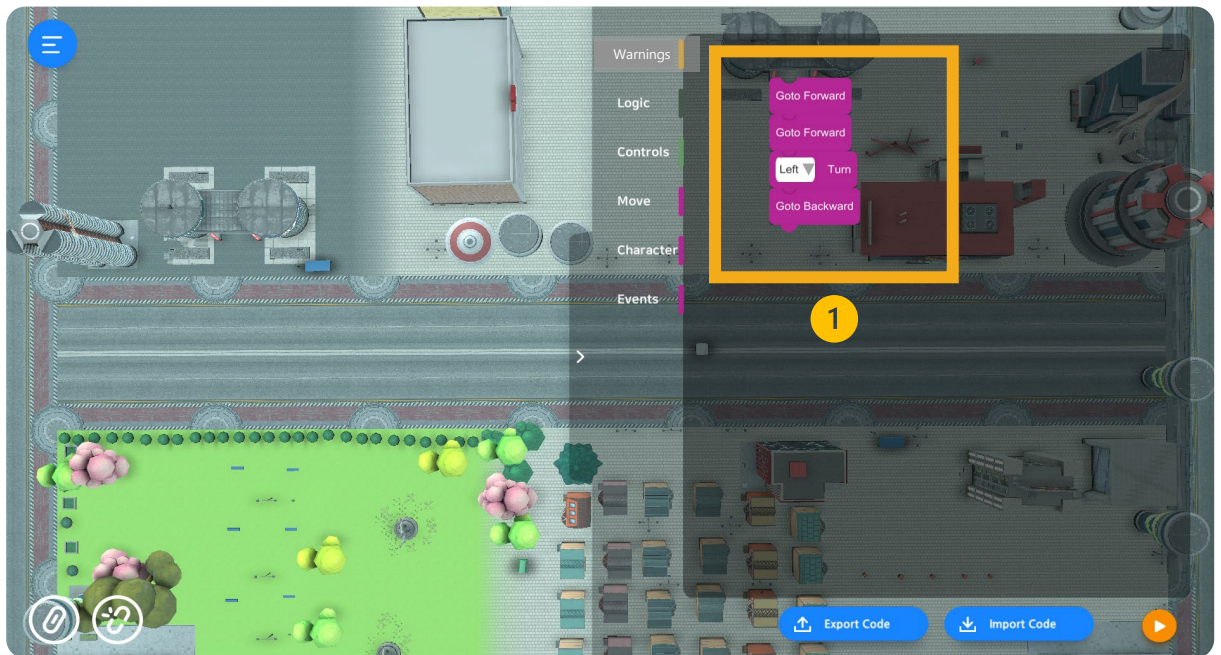
*Genibot

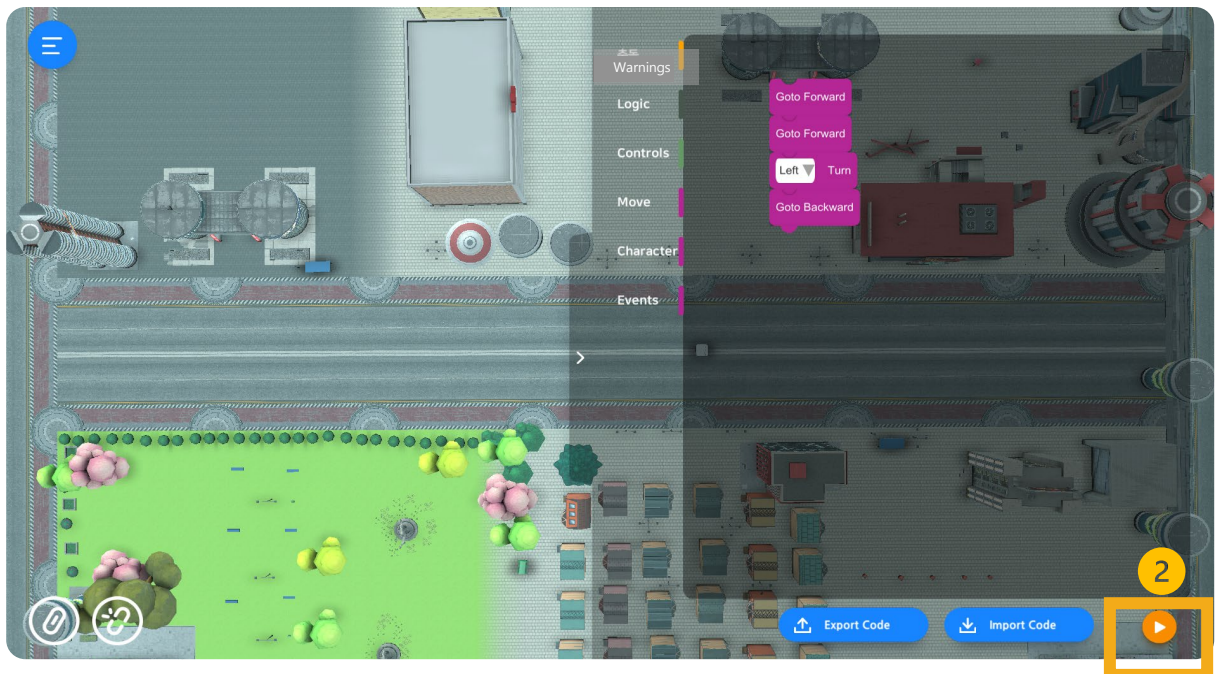## 1. Power

Press the power button for 3 seconds to turn it on.

2. Connect USB Dongle

Click the Bluetooth button icon as shown in the image to connect.

VRWARE Edu School Robot Coding

1. Code Matching

Select the block codes, drag them to the right corner and match.

2. Play

Click the play button as shown in the image and check if the robot is moving.

VRWARE Edu School

CHAPTER 10

Visual Collaboration
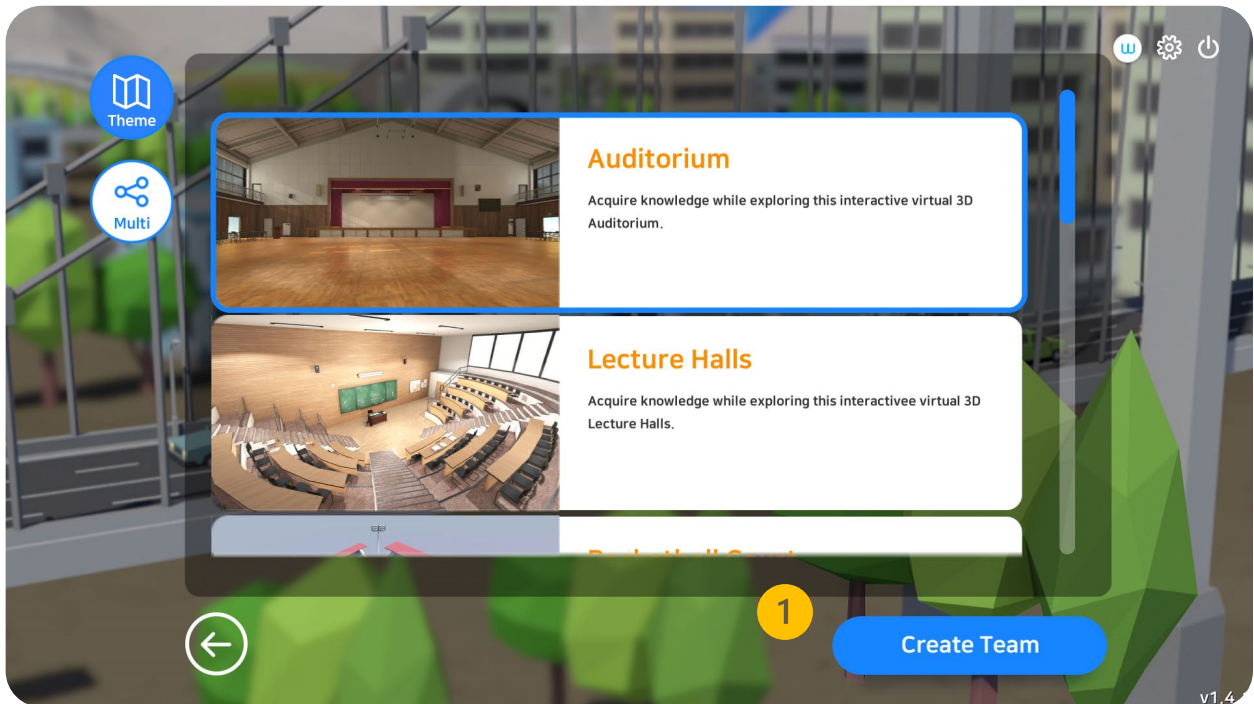
10.1 Run Meta Classroom

1. Meta Classroom

You can communicate and share data in the metaverse environment.
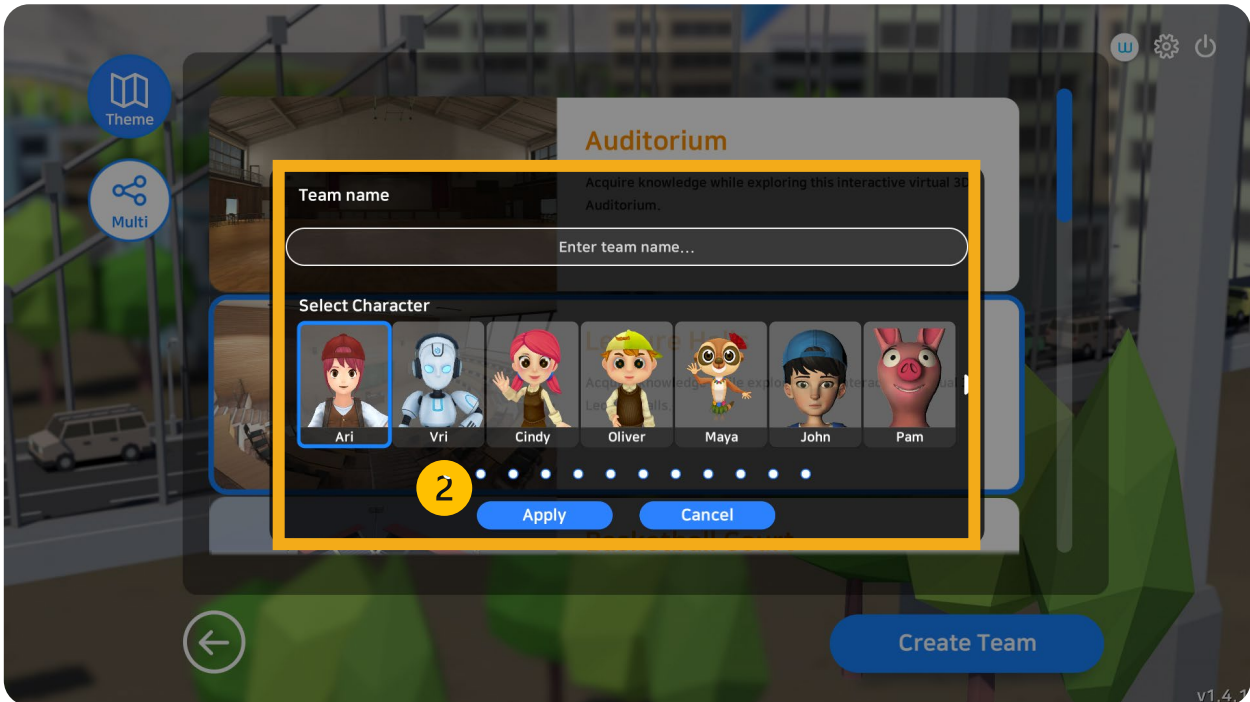
2. Meta Player

On the main menu under visual thinking category, select meta player and click start.

10.2 Create teams

1. Create teams

Click on the preferred metaverse theme and then select Create Team.
(auditorium, university, high school, basketball court, farm, hospital, laboratory,
spaceship, cruise ship, elementary school, soccer field)

2. Choose your team name and character

Select a team name and character (player) and click Create.

10.3 Team Waiting Room

1. Team Waiting Room

After creating the team, wait for other users to join
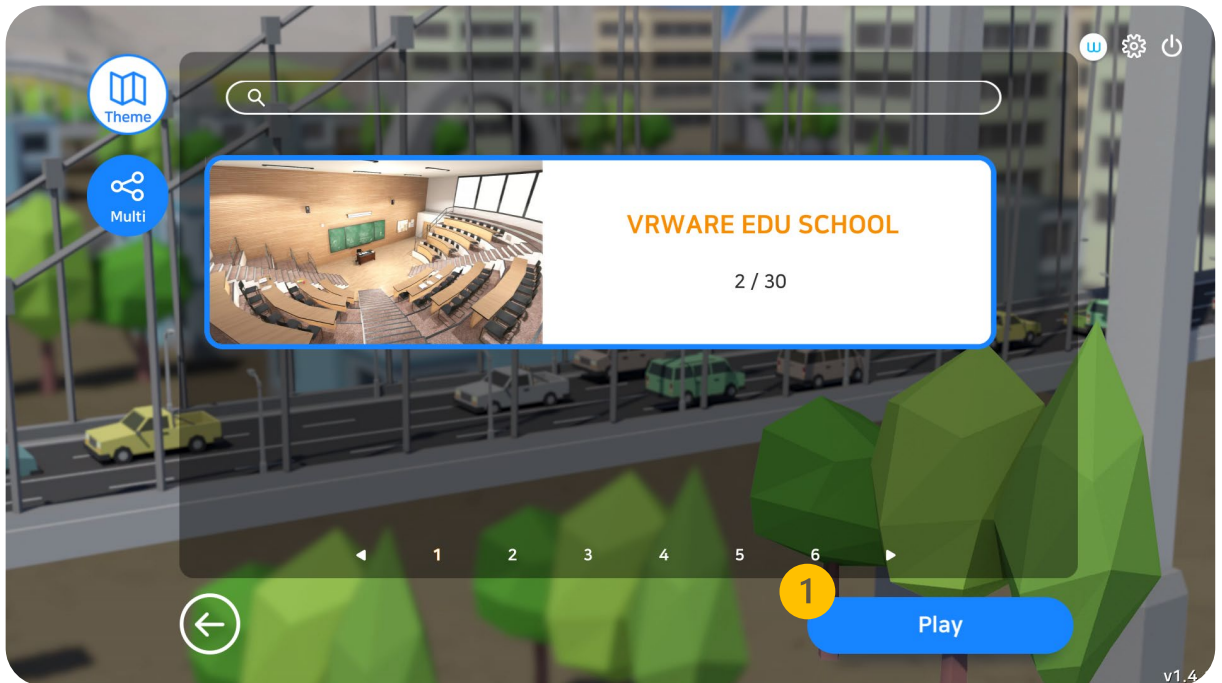
2. Waiting list

You can check the members on the waiting list that joined the team.

3. Start

Once all members on the list are connected, press Start to play.

10.4 Join the team

1. Join the team

Select the newly created team and click on Play.

2. Select a character

Select a character(player) and choose confirm.
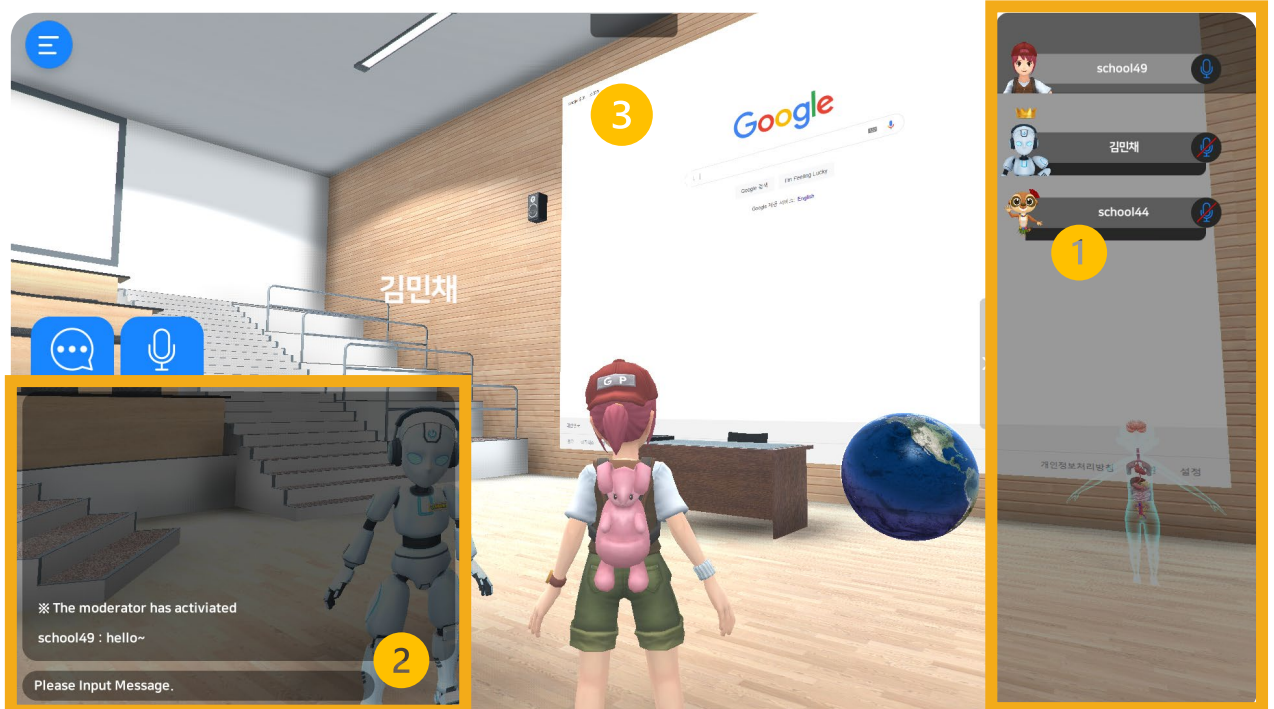
Meta Classroom

1. Team Waiting Room

Click on Start after entering the waiting room

* Only the host can activate the play.

10.5 Take a Class

1. list of users who are logged in

You can now check the list of players who are currently logged in.
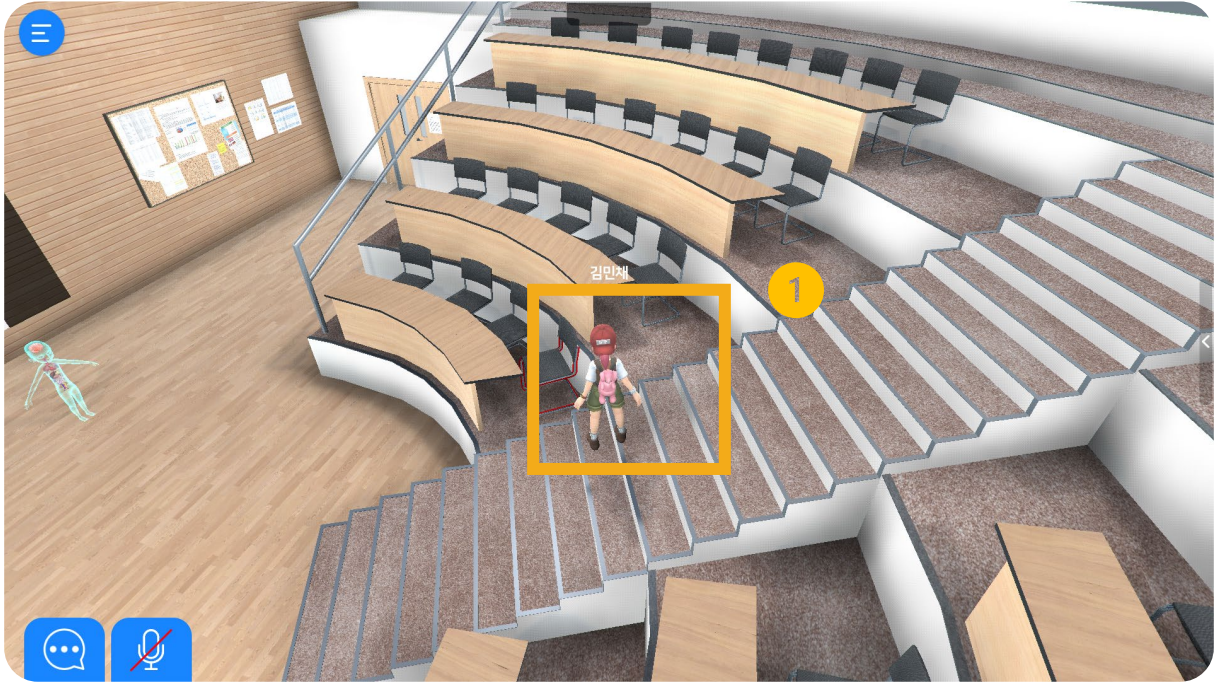
2. Text Chat

You can communicate with other users by text through the chat window.

* Only the host can disable the chat.

3. Share data

You can share data with other users by searching for the data you want to share.

10.6 Using the microphone and how to be seated

1. Sitting on a chair

You can sit down by placing the mouse cursor over the chair you want to sit on and pressing the 'E' button on the keyboard.

2. Adjust your microphone setting

After connecting a microphone, you can communicate with other users.

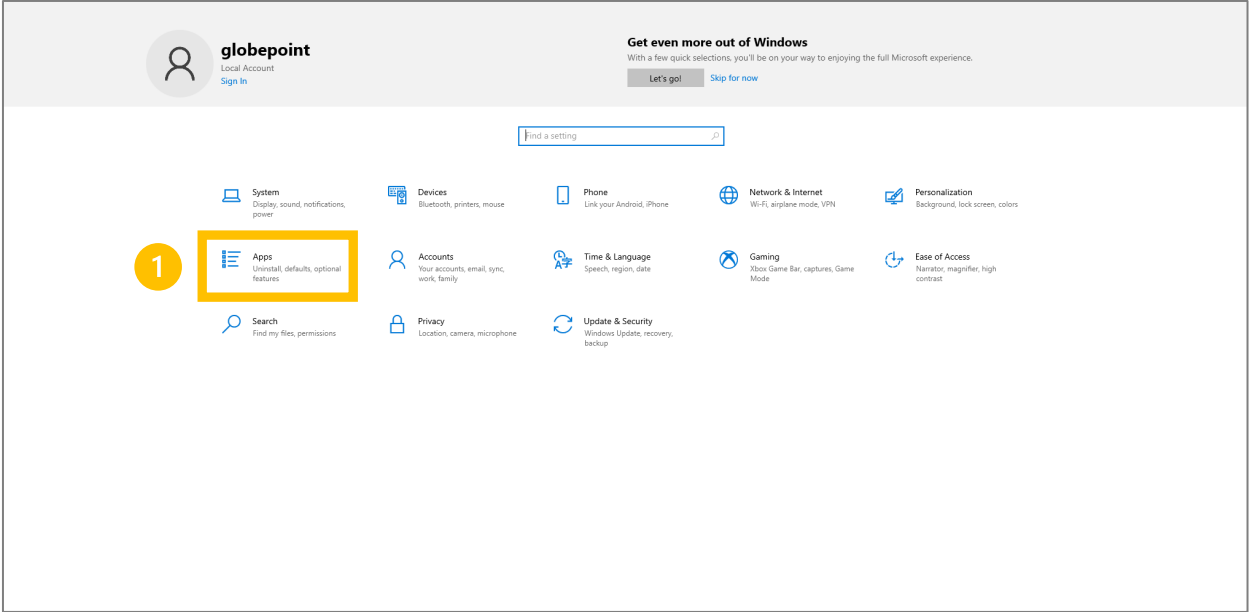 * Only the host can request to unmute the microphone.

CHAPTER 11

VRWARE Edu School etc.

11.1 Delete Program

11.1 Delete Program

1. Delete VRWARE School

On the Windows main menu select "apps" search for VRWARE Edu School, right click to uninstall.

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