

# USER GUIDE TO VIRTUAL REALITY EDUCATIONAL ESCAPE ROOM

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## OVERVIEW OF INITIAL TEMPLATE

### STELLA DOLCE

Stella Dolce is an escape room that aims to teach students about entrepreneurship in a fun, gamified environment. The theme is based on the story of taking over a bakery after your aunt has passed away, while navigating complications with the mafia. Play the game and save your aunt's legacy!

The entire escape room is composed of 3 different rooms built in Mozilla Hubs: the introduction lounge, the main room, and the final room. The introduction lounge is a space meant to get students acquainted with the controls within the environment and to introduce them to the storyline of the escape room. The main room is where most of the puzzles for the escape room can be found. The final room serves as a boss stage for the game.

### PUZZLES

Some puzzles require interacting with objects in the room, while puzzles are provided through a website coupled to the Hubs escape room. The questions can be modified with the help of the admins of VR ER. Please contact them for support. See escape room flow in the *Additional Information* at the end of the document.

### DEMO ROOM LINKS

Introduction room: <https://hubs.mozilla.com/xyiuTig/vr-er-intro-room-demo>

Main room: <https://hubs.mozilla.com/KiBD6rg/vr-er-main-room-demo>

Final room: <https://hubs.mozilla.com/fKQVLY2/vr-er-final-room-demo>

These rooms also have templates as a spoke file, which can be modified or remixed in Spoke (see in *Additional Information* section later in this document).

## SETTING UP ESCAPE ROOMS

### MOZILLA HUBS ROOMS

If not using the demo rooms, set up your own room from the provided scene templates.

Follow the links below to create a room for each of the scene (select *Create a room with this scene*). Once you've created your room, before entering, click on *Options* to change the room settings. Change the name of the room, scroll down and click *Apply* to apply changes. Make sure to save the link to the room via your address bar! You will need to share this so everyone can enter the same room.

Introduction room: <https://hubs.mozilla.com/scenes/Xkwts7m>

Main room: <https://hubs.mozilla.com/scenes/LULGzsK>

Final room: <https://hubs.mozilla.com/scenes/5tHWuLq>

#### ENTERING VIA LAPTOP

Once the room has been set up, the link can be shared and if accessed from a laptop, users can join directly from their browser.

#### ENTERING VIA VR

Once the room has been set up, if users would like to join with VR, instead of entering room directly, click on *Enter on device*.

Alternatively, the link to the room can also be accessed via the browser in the user's VR headset.

### PREPARATION BEFORE SESSION (DAYS BEFORE)

#### VR GEAR

- Make sure VR headsets are fully charged
- Update Browser application, if necessary. It may also be the case that your VR device needs updating (this will be prompted if you have not used the headsets in a while, so make sure to add buffer time into preparation)

Things to take into consideration:

- Amount of students who will be using headsets: make sure there are enough headsets available
- Location where headsets will be used: make sure there is enough space to move around

#### HUBS SETUP

If you would like to modify the questions and clues for the escape room, please contact the administrators for the escape room before hand at [escaperoom@hva.nl](mailto:escaperoom@hva.nl).

#### INTERNET CONNECTION

If using the VR escape room with multiple people on HvA campus, it is advised to contact ICTs and ask for increased bandwidth during the session. Note that you will need to register it as an event and give the location of the building in which it is taking place.

## PREPARATION BEFORE SESSION (HOURS BEFORE)

### VR GEAR

With prior preparation, there should be enough headsets for all the students who want to enter via VR. Note that students may also join via laptop if desired.

Prior to session, make sure the VR headset are fully charged and that browser works.

Once headsets are in place, set up Guardian (play space). This determines the area in which the user will be in VR. Make sure the floor is calibrated properly, otherwise user may experience being below or above floor level.

For Oculus Quest 2, see setting up guardian tutorial [here](#).

Tip: use post-it notes to signify space in physical world that user can move around.

Additionally, for users who have never been in VR before, it may also be useful to demonstrate:

- How to use hand controllers
  - o Where to place fingers, what triggers do, how to “click”, etc.
  - o Locating the Oculus universal button (in case user wants to exit full screen mode)
  - o Joysticks as one of the possible ways to move around in Hubs
- How to adjust headset
  - o Adjusting size of headset placement over head
  - o Adjusting focus on lens
  - o Adjusting volumes via the volume buttons

These adjustments differ per model of headset.

Prior to entering the escape room, the introduction room is also meant to guide users through navigation and interaction with objects in Hubs, for users in VR and on regular computer browser.

### HUBS SETUP

Prior to the session, go into the rooms (best on laptop) to prepare by adding objects. See how to access objects in *Additional Information* section at the end of the document.

### Introduction room

Add training objects to the room. This can be done by entering the room (either demo room or one you have created yourself). Select *Place*, then *Upload*. A menu will pop up, asking for a URL. Use the Sketchfab URLs below:

- <https://sketchfab.com/3d-models/intro-puzzle-square-0f699424a8a442109033e16f83a49943>
- <https://sketchfab.com/3d-models/intro-puzzle-circle-97720c942dc64e94a2a48936ae1c8d64>

Make sure to place multiple copies of the objects in the room, preferably near where the puzzles are on the walls.

### Main room

Similar to how you placed the objects in the introduction room, place objects for the newspaper covers in the main room. Make sure to place multiple copies near where the newspaper is attached to the wall (just outside the bakery).

- Newspaper cover 1: <https://sketchfab.com/3d-models/puzzle-newspaper-yellow-c041d27993cf4bc7b5b2985d90e0fb86>
- Newspaper cover 2: <https://sketchfab.com/3d-models/puzzle-newspaper-pink-bc363475303040b5ad70a51a585fb0b5>

Once everyone is in the room, make sure the added cover objects are still there.

During game play, moderator/facilitator will be asked for the link to the final room once players have completed all the puzzles in the main room, so make sure to have your room links ready to share!

## TROUBLESHOOTING

### ROOM STUCK ON LOAD

If the Hubs room does not seem to load or seems to be stuck, refresh the browser page and wait; otherwise, try exiting browser as an application ad reopen

### USER UNEXPECTEDLY KICKED OUT OF ROOM

It could be that a user may be kicked out of the room due to connectivity issues. All that can be done here is to ask for a bit of patience and to log back in.

### LOW PERFORMANCE OVERALL

If room is taking too long to load, is lagging or if people keep getting kicked out, try to create copies of the room (by creating a new room from original scene template). Reallocate people to other rooms.

Note: If objects that are not part of this escape room package are brought into the room, it may also contribute to lower performance if the file size is too big.

### LOCKED CLUES/HINTS DOES NOT LOAD

It could be that on some VR headsets, once a link is clicked, users may be brought out of full screen, but nothing happens. If this happens, go back into the escape room full screen, then click on the link again.

### ADDITIONAL INFORMATION

#### STELLA DOLCE ESCAPE ROOM FLOW

##### Puzzle 1:

- Hint 1a: newspaper – pasted on wall outside of bakery (store front); overlay sheets (objects to be added with Sketchfab links — see in *Accessing Extra Assets* section below)
- Puzzle 1a: link to locked hint attached behind cash register (unlocks hint to calculate income)
- Puzzle 1b: link to locked clue 1 attached inside cash register (animated)

##### Puzzle 2:

- Puzzle 2a: Word search on wall outside of bakery (alley) -- tip: prompt participants to try using pen functionality from Hubs; 4 fixed costs from word search
- Puzzle 2b: link to locked clue on “Energy saver” sticker on oven

##### Puzzle 3:

- Puzzle 3a: Word search on wall (same from 2a); 5 variable costs from word search
- Puzzle 3b: link to locked clue attached to flour image in box on table in the kitchen.

##### Puzzle 4:

- Hint 4a: Rent invoice found in house on the wall
- Puzzle 4a: link to locked clue attached to clutter of kitchen utensils in box in alley; answer of 19200 can be calculated from numbers in invoice from Hint 4a
- **Note: Once your players have solved this clue, the facilitator will have to give them the link to the final room!**

##### Final Puzzle F:

- **This final puzzle occurs in a separate room (VR ER final room)**
- Hint can be found on pinboard in room, on a post it with 4 letters, which is the order for the correct answer.
- Puzzle F: answer multiple choice answers correctly, consecutively to solve the escape room, otherwise Game Over screen will play.

## USING SCENE TEMPLATES 1: REMIX

The template scenes for the three different scenes can be remixed in Spoke. This means that you can create your own copy of the scene and further build on it to create your own scene. You can then create multiple rooms from the scene that you have remixed.

Read more [here](#).

Use the following link to remix scenes for each of the template:

- Introduction room: <https://hubs.mozilla.com/scenes/Xkwts7m>
- Main room: <https://hubs.mozilla.com/scenes/LULGzsK>
- Final room: <https://hubs.mozilla.com/scenes/5tHWuLq>

Remixing can be done by clicking 'Edit in Spoke', which will create a copy of the project on your account and allow you to build off from the original scene model.

## USING SCENE TEMPLATES 2: IMPORT SPOKE FILE

The template scenes can also be imported into Spoke for further edit by importing the spoke file of each of the scenes. These files can be found in the assets package provided with this guide. See section below on how to access it.

## ACCESSING EXTRA ASSETS

There are different types of assets: scenes, objects, and media files. These can be modified and brought into the escape rooms to make it more unique and customized towards your needs.

Note: You will need to have a HvA email to access these links on OneDrive.

### Scene

The scene asset can be accessed either as a Spoke file or a .glb file. The Spoke file contains the full scene and all objects within it. The .glb file is the base model from which the Spoke scene is built. For each scene, there is one spoke file and one .glb model file.

All files for the scenes can be accessed via this link [here](#).

### Objects

All objects that are found in the scenes can also be accessed individually and brought into Hubs through the model import functionality.

All object models as .glb and .blend can be found in the following link [here](#).

All objects links to models on Sketchfab can be found [here](#).

## Media files

The media files are the images that were used as signs throughout the escape room.

All original media files (as Adobe Illustrator files or images) can be found in the following OneDrive folder via this link [here](#).

Some of these are customizable and can be found on Canva via the links below (Note:  
Create or login with your Canva account first before you can edit):

- [Signpost texts](#)
- [Portal in introduction room](#)
- [Hint for Puzzle 4a](#)