

# Document for Dragon's Den

## 1. Purchase List

**for choir loft (4~5) + ground experience (4~5)**

**8~10 \* Quest 3 (\$499.99 each)**

Total spending: \$3,999.92 ~ \$4,999.90 (free shipping, tax not included)

Purchase link: <https://www.meta.com/quest/quest-3/>



**Charging station (power strip) \* 2 (1 for choir loft, 1 for ground level)**

Each Quest 3 device comes with a USB-C charging cable and power adapter, you'll need two power strips for charging

**for ropes course experience (XREAL Light glasses and phones are paired)**

**4~5 \* (\$399.00 each)**

Total spending: \$1,596 ~ \$1,995 (free shipping, tax not included)

Purchase link: <https://us.shop..com/products/-light>



**4~5 \* phone: Samsung galaxy s20 (\$180.00 each, **refurbished**)**

Total spending: \$720 ~ \$900

Purchase link:

<https://www.amazon.com/Samsung-Galaxy-128GB-Cosmic-Gray/dp/B08BX6WZW1?source=ps-sl-shoppingads-lpco ntext&ref =fplfs&pssc=1&smid=A2C4J8HSA4XDN6>

**Prescription Lenses (\$35 each, for user with XREAL Light)**

[https://www.aliexpress.us/item/3256805475858214.html?src=google&aff\\_fcid=3fde7e938b2d4445854106c9cc840bd 9-1713406887303-03338-UneMJZVf&aff\\_fsk=UneMJZVf&aff\\_platform=aaf&sk=UneMJZVf&aff\\_trace\\_key=3fde7e93 8b2d4445854106c9cc840bd9-1713406887303-03338-UneMJZVf&terminal\\_id=91c8660e359840ed936c1d854cd4f75 9&afSmartRedirect=y&gatewayAdapt=glo2usa4itemAdapt](https://www.aliexpress.us/item/3256805475858214.html?src=google&aff_fcid=3fde7e938b2d4445854106c9cc840bd 9-1713406887303-03338-UneMJZVf&aff_fsk=UneMJZVf&aff_platform=aaf&sk=UneMJZVf&aff_trace_key=3fde7e93 8b2d4445854106c9cc840bd9-1713406887303-03338-UneMJZVf&terminal_id=91c8660e359840ed936c1d854cd4f75 9&afSmartRedirect=y&gatewayAdapt=glo2usa4itemAdapt)

**AA batteries:** The Quest 3 includes two AA batteries preinstalled in the controllers, but you will need replacements in the future.

**Microfiber lens cloths:** Clean the headset lenses with lens-safe cloth.

**Skin-safe cleaning wet wipes:** To prevent germs from spreading, clean the devices regularly with wet wipes. **DO NOT wipe the lenses with strong chemicals.**

**Estimated Total Spending for all devices & accessories: \$8000 +**  
**(total spending will exceed estimation as market price fluctuates for refurbished devices)**

## 2. Facilitator Instructions

### 1. XREAL Light Experience

**[if Xrea stop working at any step, unplug the cable and plug in again]**

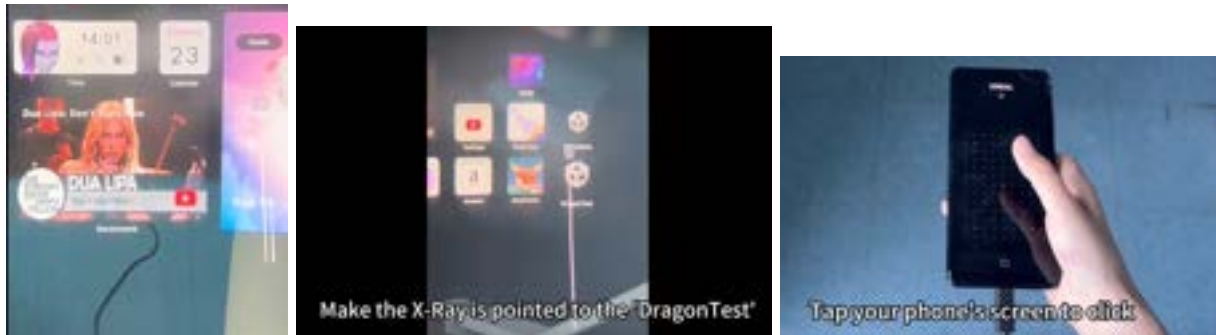
\*Preparation beforehand: require containers to store XREAL Light glasses on platforms



Step1: turn on the phone & plug in XREAL Light to the phone



Step2: stand in the middle of the pillar, face forward to the sticker in front, put on XREAL Light.



Step3 : the main menu will be in front of you, move the phone ,you will find a white X-Ray is shot from the top of the phone. Look right and find an app called "DragonTest", tap the phone screen to select the app.

**[game starts here]**



Step 4: Once clicked, look straight forward immediately, keep your phone facing forward as well



Step5: the game start

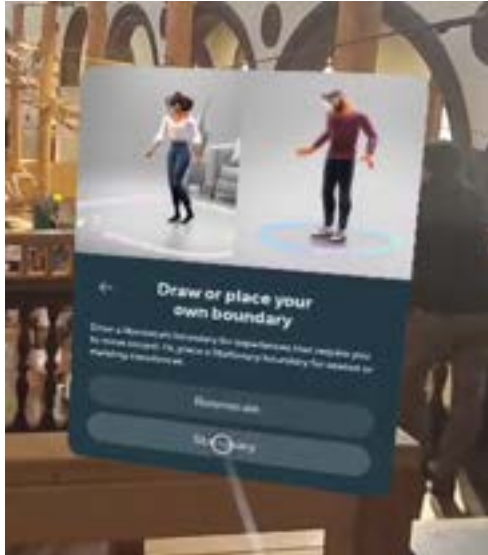
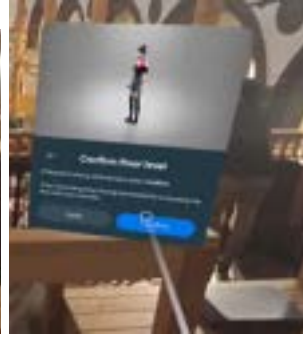
**\* Notice:**

**Avoid taking off XREAL Light during the playthrough**

**Avoid turning off the phone during the playthrough**

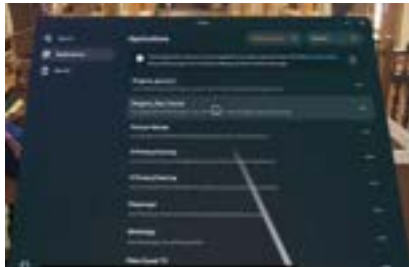
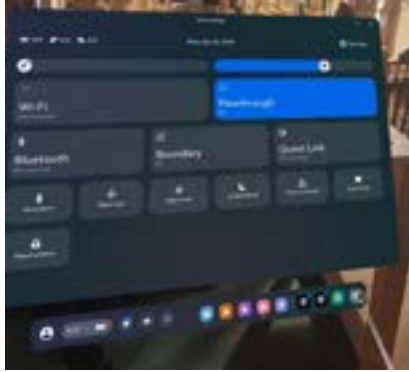
**2. Quest 3 Choir Loft Experience**





1 use the button on picture to interact:set boundary

Set boundary method1:click the time button on the left side, click boundary button,than follow the boundary setting instructions (choose"stationary")



### [game starts here]

2 click the right button, find "unknown resources", choose "Dragons\_Den\_Formal" to start the game



3 If the scene is not align well, long press button on the picture to realign the scene



4 use grip button on picture to grab the fruit



5 put fruit to the red band of the slingshot as the picture on the left and feed dragon



6 When the signal shows, feed the dragon with a blueberry.





7 the game ends

**3. Quest 3 Ground Floor Experience**

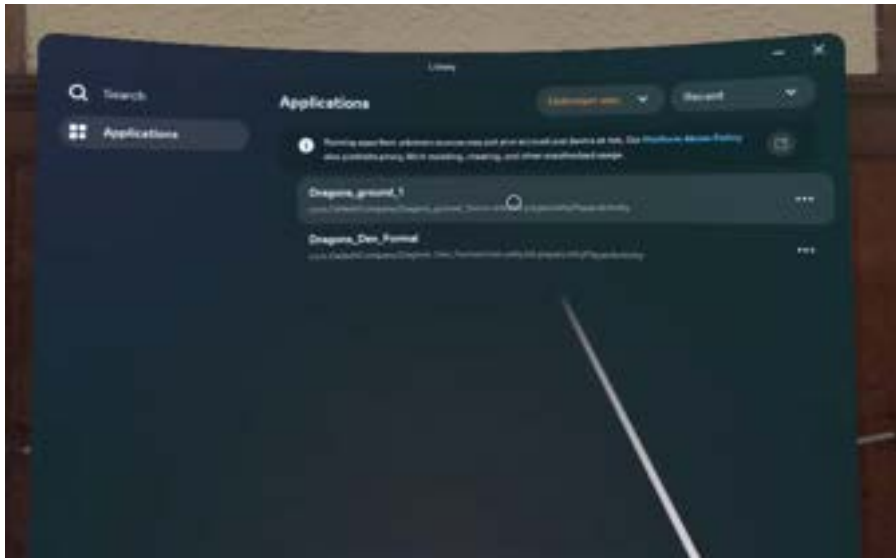




1 use the trigger button to interact.set boundary method2 (method1 or 2 both work) :click “settings”,click “physical space”,click” set new boundary” .Then set the boundary according to the instructions. (choose”draw room scale boundary” )



2 click this button to change mix reality and virtual world



2 click "library" button, find "unknown resources", choose "Dragon\_ground\_1"

**[game starts here]**



3 If the scene is not located in the right way, use the mata button on the picture to relocate the scene.



4 left hand is slingshot, right hand is hand. Use grip button to grab fruit and put it on slingshot to clear obstacles. Same color fruit clear same color obstacles



5 When there is only green rock left, feed any fruit to the green dragon, and the dragon will clear the obstacle for you.



6 the scene outside of the window disappears, and the game ends.

#### **4. game instructions for the player (step by step for playthrough)**

##### **XREAL Light (Rope course)**

- 1 going to the next platform
- 2 touch the pillar, trigger the animation
- 3 go to next pillar trigger the animation
- 4 reach to the end and trigger the animation

##### **Quest 3 (choir loft)**

- 1 Pick up any fruit by squeezing the trigger on the right controller and place it in the slingshot.
  - 2 Pull back the slingshot and shoot fruit to dragon's mouth
- Repeat 3 times
- 3 for the 4th fruit you feed, choose blueberry, and shoot at dragon, dragon will go fix the propeller

##### **Quest 3 (ground)**

- 1 Pick up dragon fruit by squeezing the trigger on the right controller and place it in the slingshot.
- 2 Pull back the slingshot and shoot dragon fruit to red wooden cross
- 3 Pick up the blueberry by squeezing the trigger on the right controller and place it in the slingshot.
- 4 Pull back the slingshot and shoot blueberry to blue mud
- 5 Pick up star fruit by squeezing the trigger on the right controller and place it in the slingshot.
- 6 Pull back the slingshot and shoot starfruit to yellow rock
- 7 repeat until all the red wooden cross, blue mud, yellow rock been finished
- 8 dragon shows up, feed dragon any fruit, and dragon will go clear the green obstacles for you

## 5.Uniqueness & goal of the experience (Selling Point)

Providing an experience with cutting-edge technology that offer pleasure and challenge for children

Potentially broadening children's horizons with diverse Virtual Reality Environment, Evoking children's curiosity and desire for knowledges through exploring Virtual World

Innovative Concept of combining ropes course with MR interactions and stunning visual mixed reality visuals tailored to highlight the historical architectural beauty of the church

## How we came to such Design

Design to site limitations

XREAL Light and Quest 3 are the most accessible and economic devices for MR experience places that only work for Quest 3: Choir Loft Platform & hallway

On the platform and Ropes-course, the interaction remains relatively static for safety purpose

The slingshot mechanism serves the longitudinal space layout for the church

Design For Learning:

Delineating foreign scenery and element with in-game items

Reinforcing the friendly behavioral pattern by helping game characters.

Boost troubleshooting skills by navigating through puzzle levels

Design for future development

Modularized game structure that allows more freedom in future development.

## 6.Other devices we tried & Advice for future team

Devices:

Magic Leap - unable to purchase

Hololens 2 (\$3,500) - price not affordable & incompatible with helmet

Link for product detail: <https://www.microsoft.com/en-us/hololens/buy>

XREAL Light - lack of hand tracking function & production discontinued

Advices:

1 VR experience on high rope course with Oculus 3 are dangerous and difficult to make, AR can work but still need to consider:

1 the budget of devices,quantity,duration,availability

2The size of Platforms may be too small for some interaction

3 If you need to record the final video for advertising, how can you record the video?

4 Possibility of device dropping

5 Many children who already wear glasses have difficulty wearing AR glasses(XREAL)

6 People can switch orders on a rope course, but it takes time, not everyone handles it well, children want to help,which easily ends up to trigger bigger problems which need staff to come over and take time to help . if playtest time in dragon's den is limited, please make sure no other players are on the rope course before playtesting

Other advices for playtesting:

1 Playtest with target audience earlier

2 Kept testing with correct age group children

3 Even if the experience is made for plant space, as long as the object needs to align to the whole scene, leave enough time to test in the real space more,because the construction size is not the same with the construction map, still need minor adjustments

4 Have fewer moving visuals when you're climbing(some people feel dizzy)

More feedback for naive users

5 Give XR users a separate playspace or queue(when real set things up on rope course,because sometimes experience will slow the player)

6 Zipline very fast- not able to create enough experience

7 The high rope course at the end station is pivot a little bit from the previous one, if you have that in design, please consider

Possibility:

1 try to align object on high rope course can be difficult, just to collect things floating on the air may be easier to make

2 With AR glasses, children want to interact with other children,which leads to them getting distracted from the game, this interaction may be considered as one of the features of your game.

## 7.Asset Credits

1**POLYGON Tropical Jungle - Nature Biomes - Low Poly 3D Art by Synty**---[Synty Studios™](https://assetstore.unity.com/packages/3d/environments/landscapes/polygon-tropical-jungle-nature-biomes-low-poly-3d-art-by-synty-234253)  
<https://assetstore.unity.com/packages/3d/environments/landscapes/polygon-tropical-jungle-nature-biomes-low-poly-3d-art-by-synty-234253>

2**Amplify Shader Editor**---[Amplify Creations](https://assetstore.unity.com/packages/tools/visual-scripting/amplify-shader-editor-68570)  
<https://assetstore.unity.com/packages/tools/visual-scripting/amplify-shader-editor-68570>