User Guide of 123D Catch on Android devices
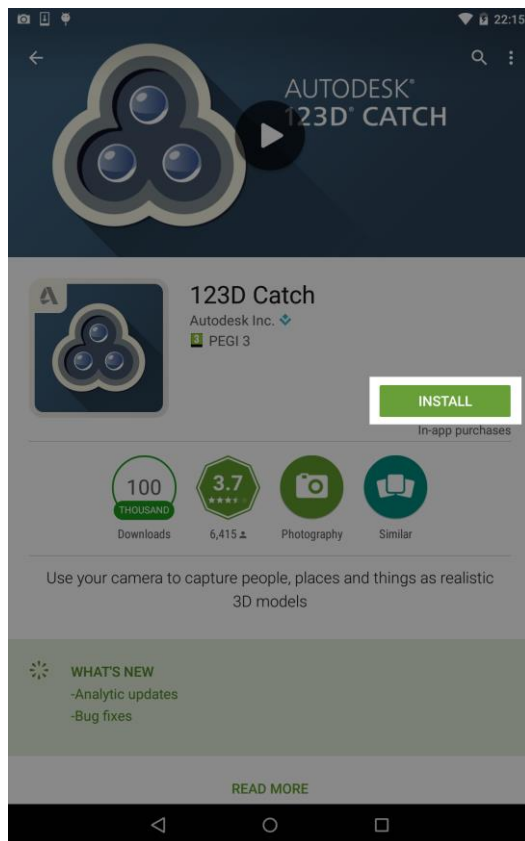
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1. Download

Click the following link and allow opening with Google Play Store. Alternatively, open Google Play Store and search 123D Catch. Then install 123D Catch produced by Autodesk Inc.
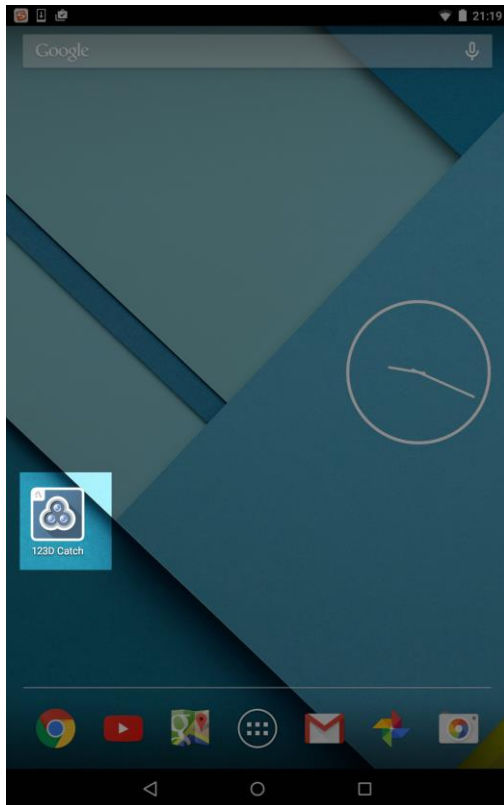
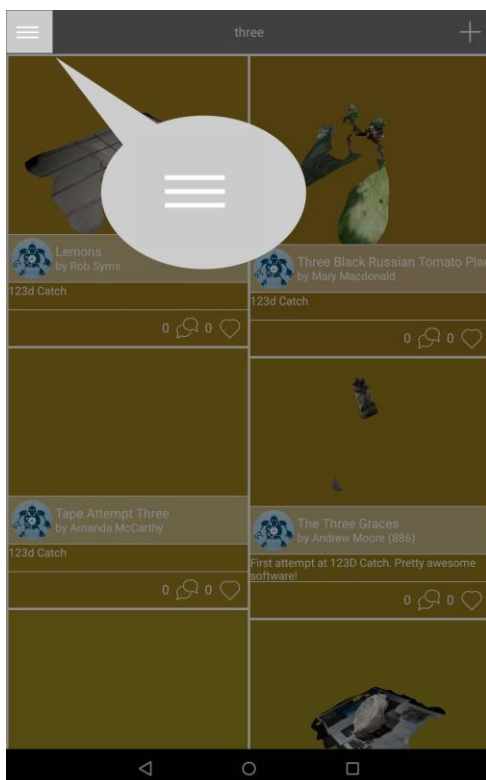https://play.google.com/store/apps/details?id=com.autodesk.Catch&hl=en_GB

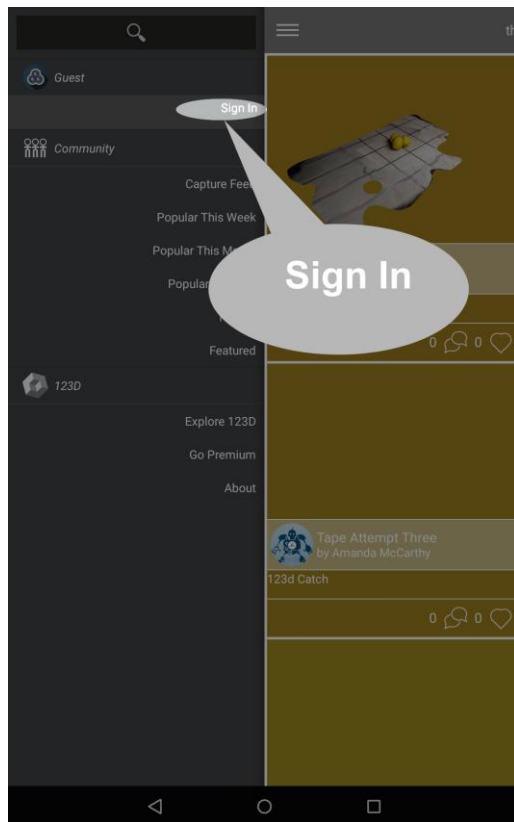

2. Sign in

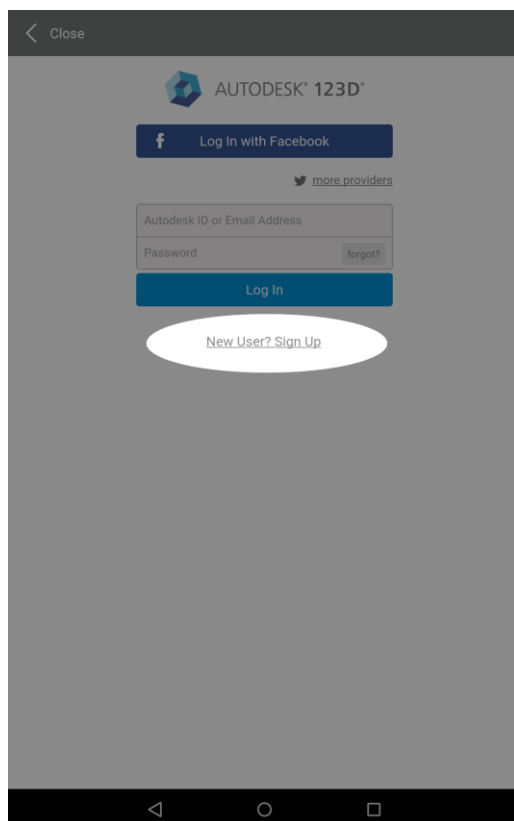## 2.1   Sign in as a new user

a) Open 123D Catch

b) Tap the hamburger menu in the upper left corner

c) Select '**Sign in**'

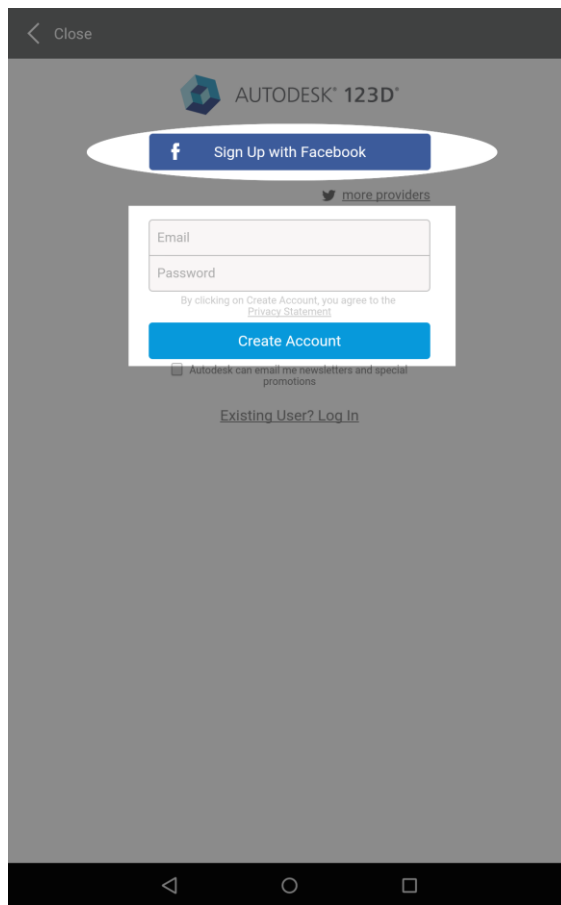d) Select 'New User? Sign up'

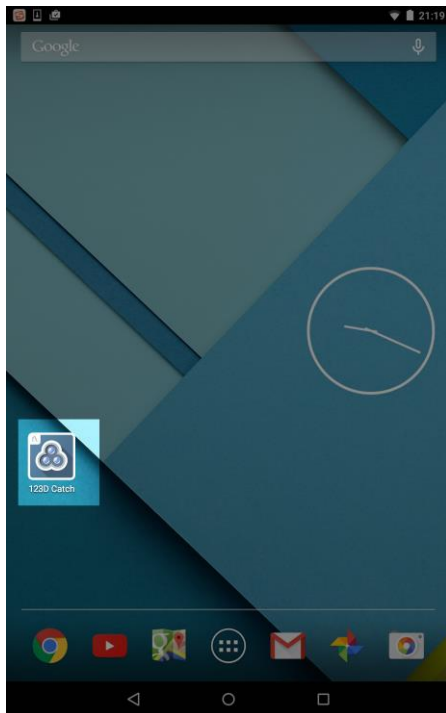e) Choose 'Sign Up with Facebook' or type in Email address with Password, and

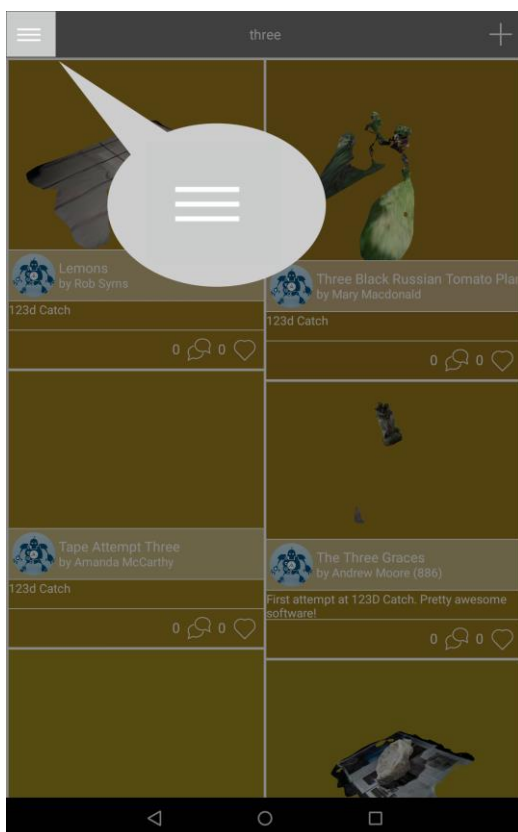click 'Create Account'   5

2.2   Log in as an existing user

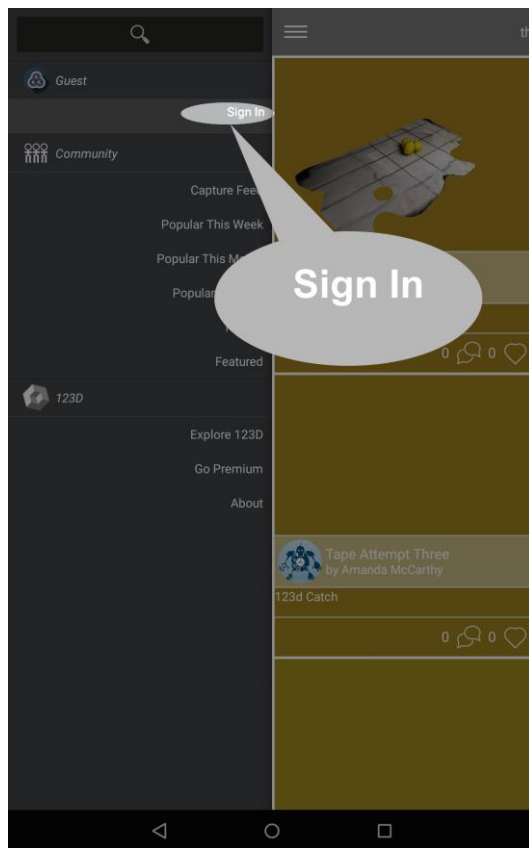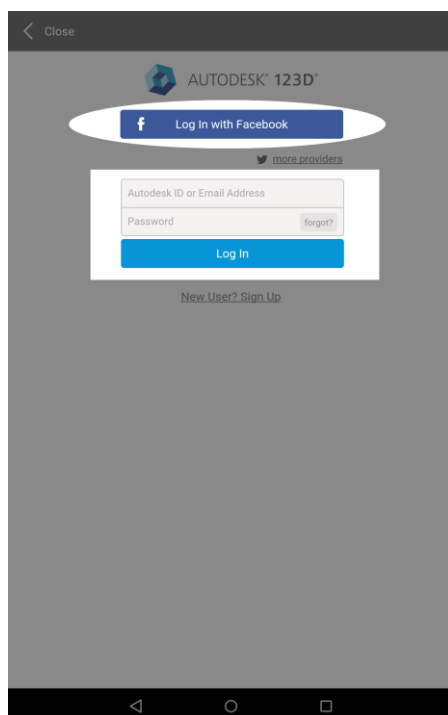a) Open 123D Catch

b) Tap the hamburger menu in the upper left corner

c) Select '**Sign in**'

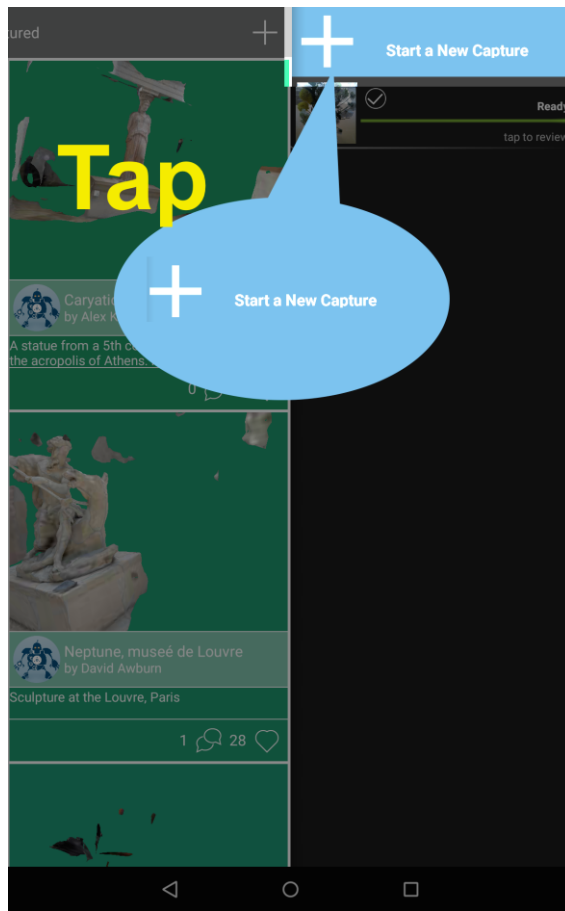d) Select 'Log in with Facebook' or type in Autodesk ID/ Email Address with Password. Then tap 'Log in'

3. Create a 3D model

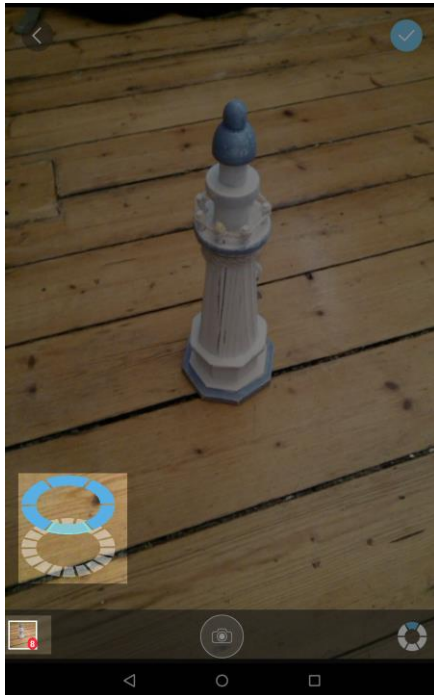a) Open 123D Catch

b) Tap the plus icon in the upper right corner


c) Select 'Start a New Capture' or the big plus icon

d) Choose an object and do not move the object when capturing photos

e) Move the camera and capture photos around the object by tapping the camera icon at the center bottom of the screen. During this process, the camera should be kept at the same horizontal height
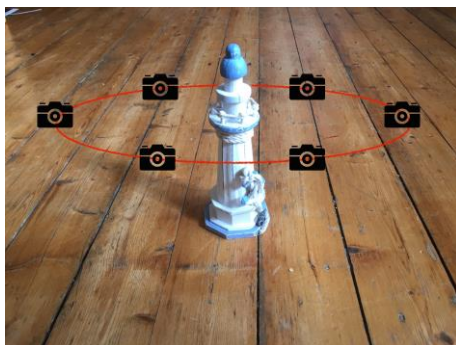
f) Capture at lease 8 images around the object, and it is better to make sure at least one whole translucent circle is marked blue
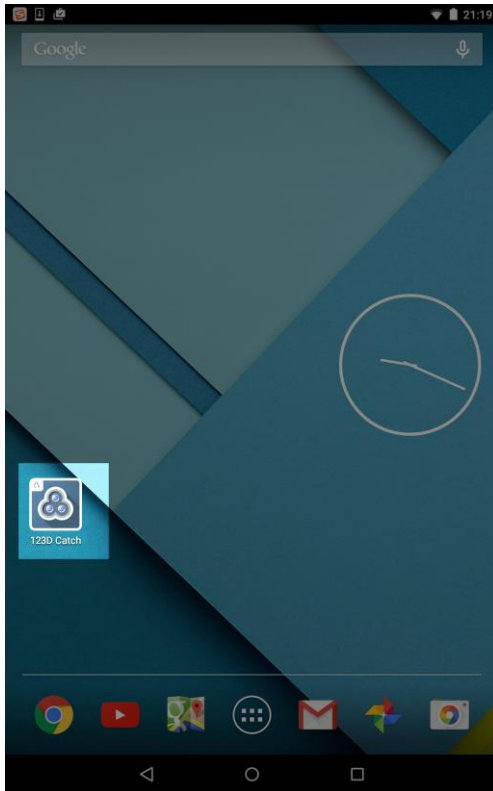
g) Tap the check icon in the top right corner to build a 3D model

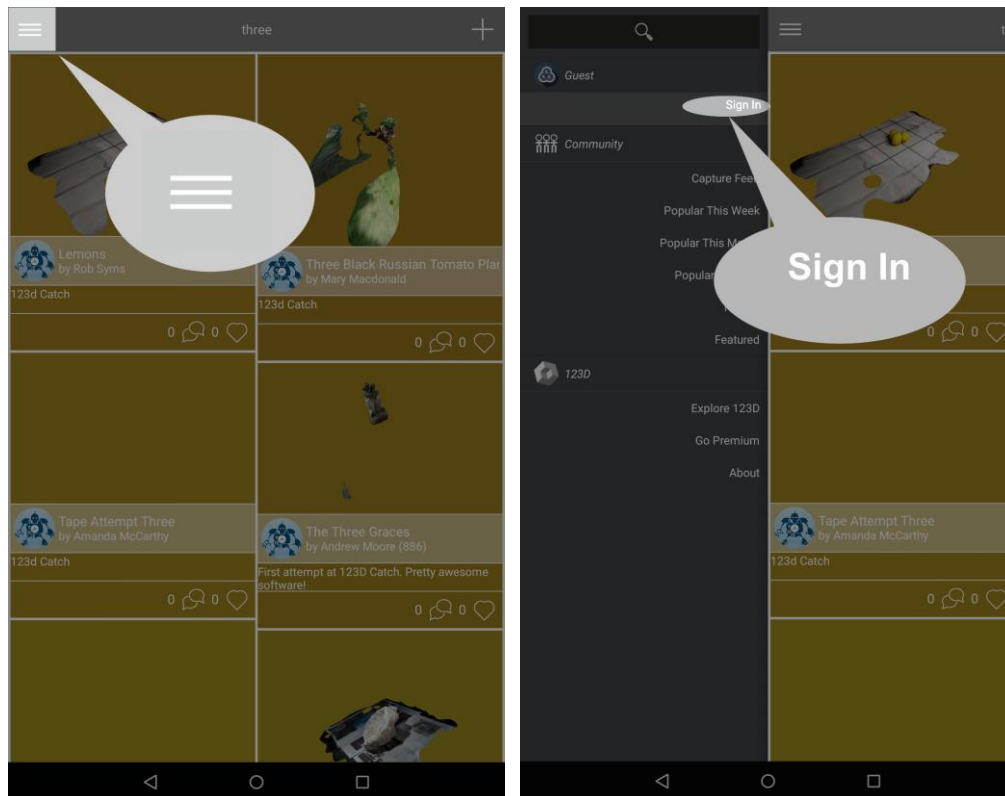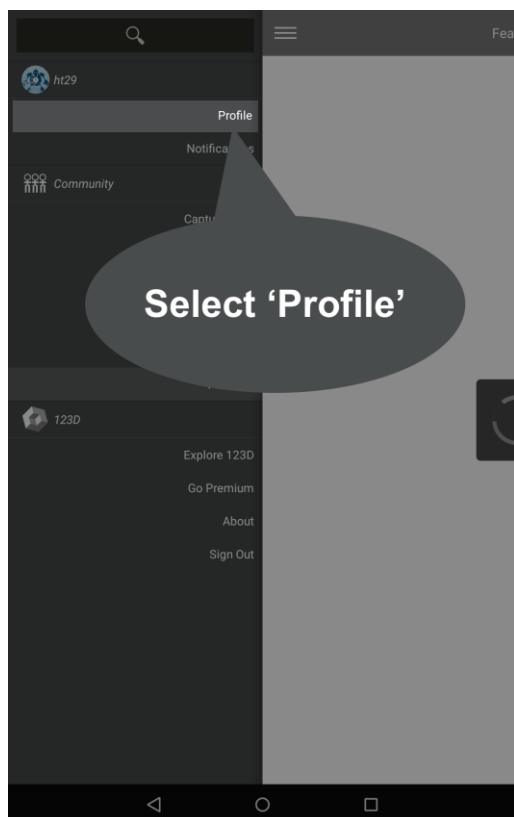Once finish capturing photos, tap ✓
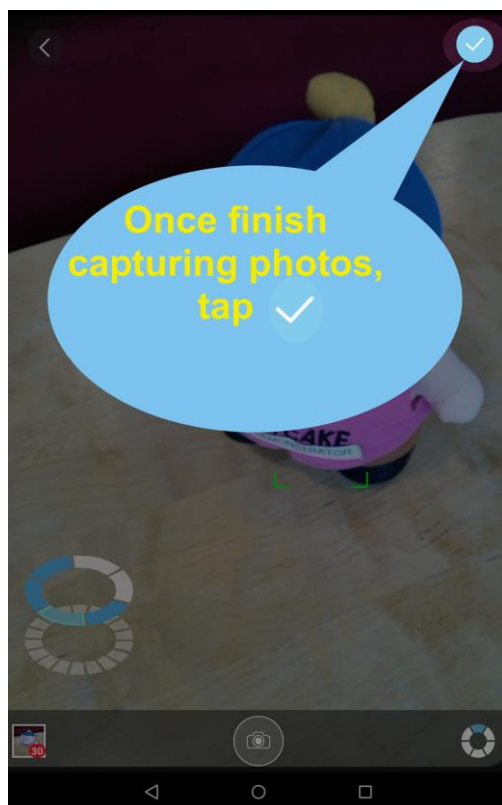
4. View a 3D model

a) Open 123D Catch

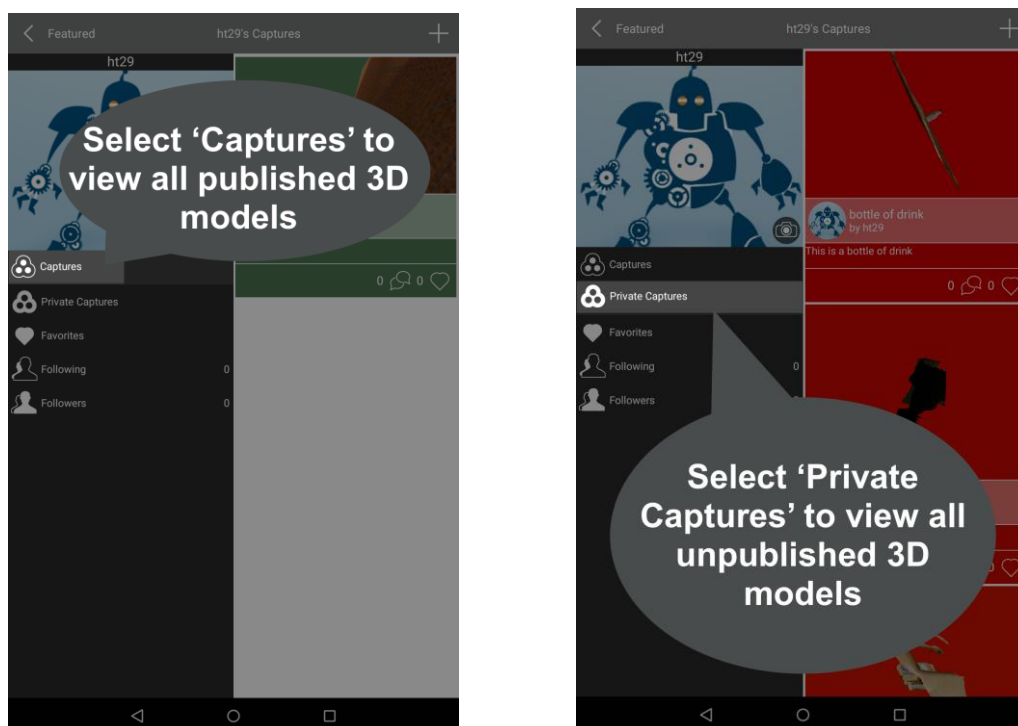b) Log in following the step 2

c) Select 'Profile'

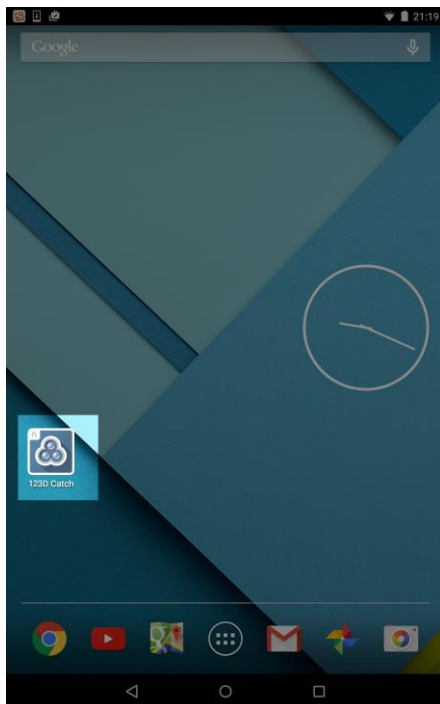d) Tap 'Captures' to view all published 3D models. Alternatively, tap 'Private

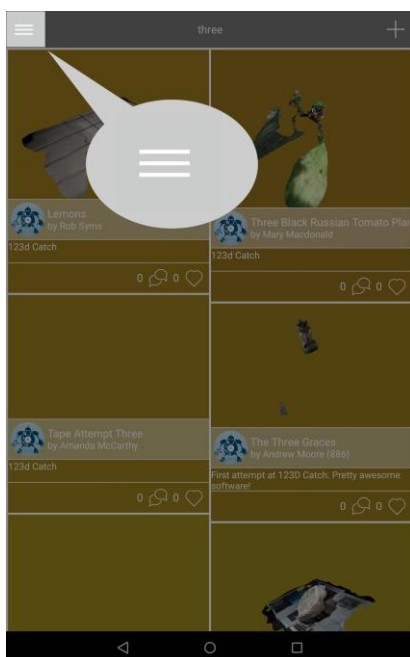Captures' to view all unpublished 3D models

5. Delete a 3D model

5.1   Delete an unpublished 3D model

a) Open 123D Catch

b) Tap the hamburger menu in the upper left corner

c) Log in as a user following the step 2

d) Select 'Profile' to view personal page

e) Select 'Private Captures' to view all unpublished 3D models

f) Select a 3D model to be removed on the right side of the screen

g) Tap the share icon in the bottom right corner of the screen

h) Select the trash icon in the bottom right corner on the popped up window

i) Select 'Delete' on the confirmation window to remove the 3D model

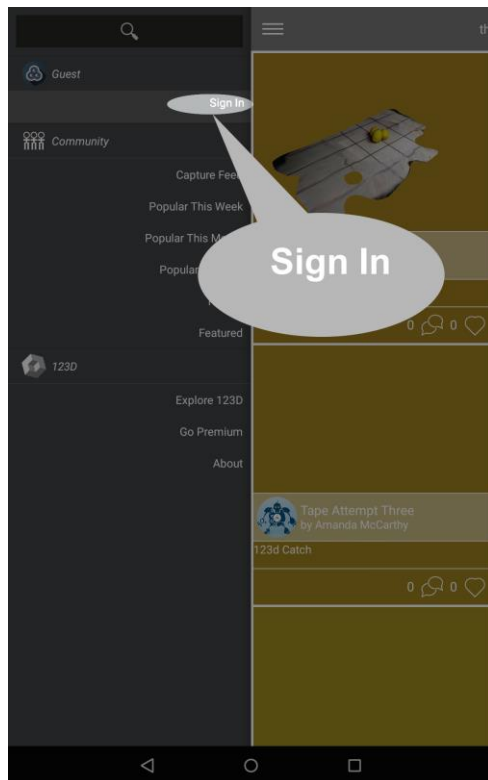## 5.2   Delete a published 3D model
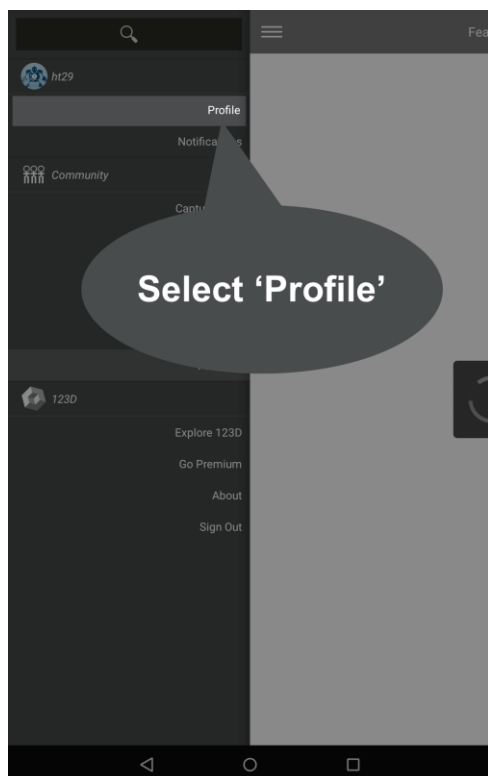
a) Open 123D Catch
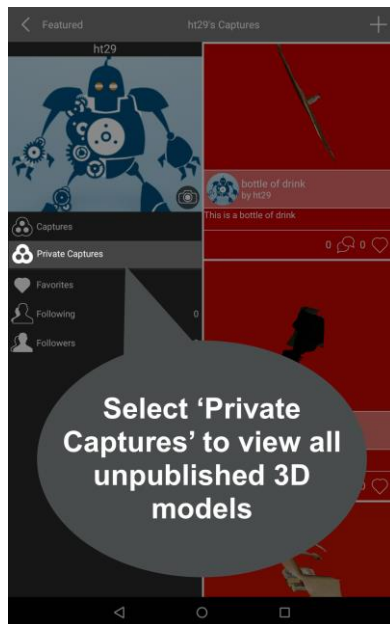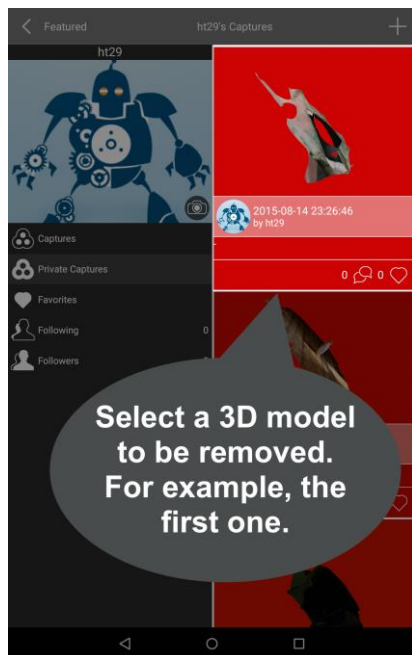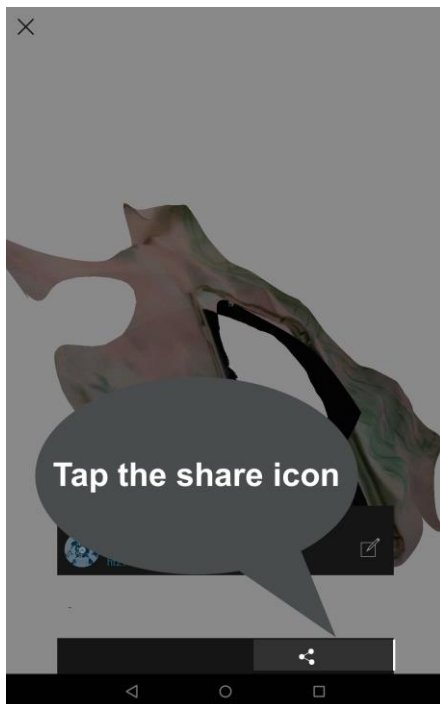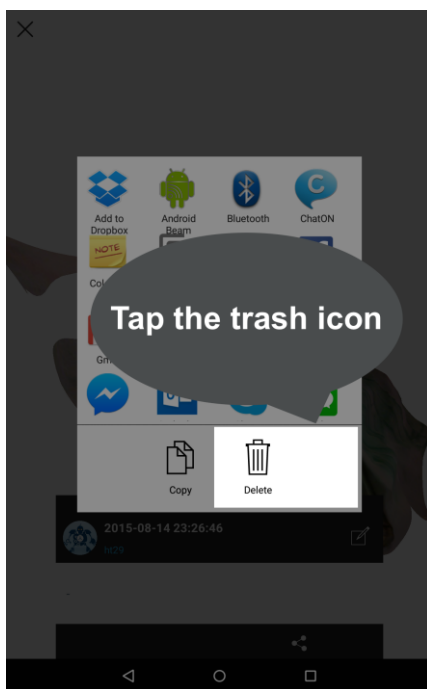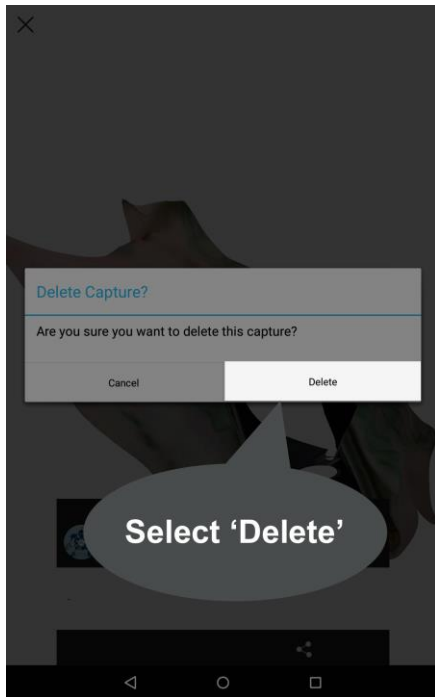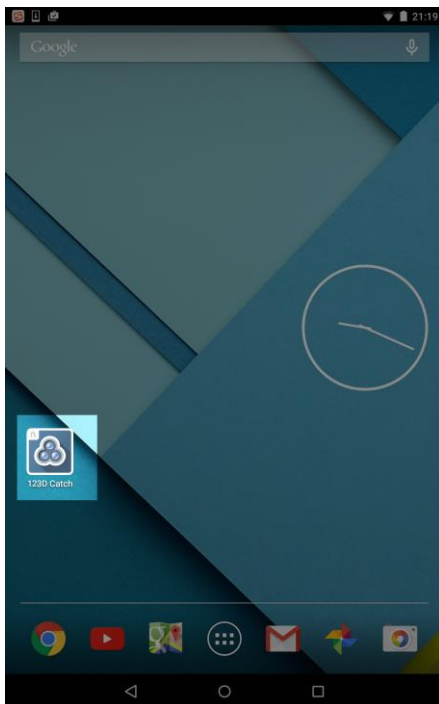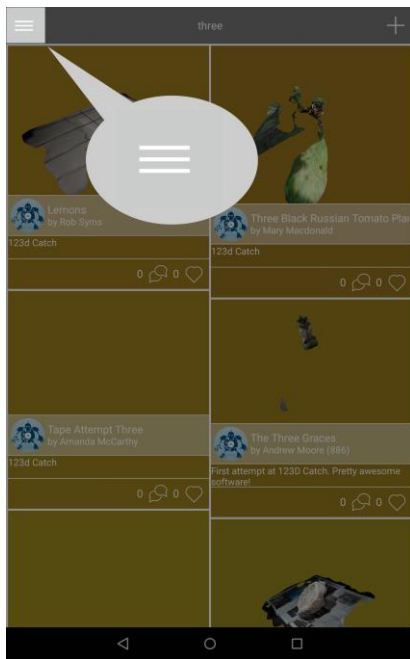

b) Tap the hamburger menu in the upper left corner

c) Log in as a user following the step 2

d) Select 'Profile' to view personal page

e) Select 'Captures' to view all published 3D models

f) Choose a 3D model to be deleted on the right side of the page
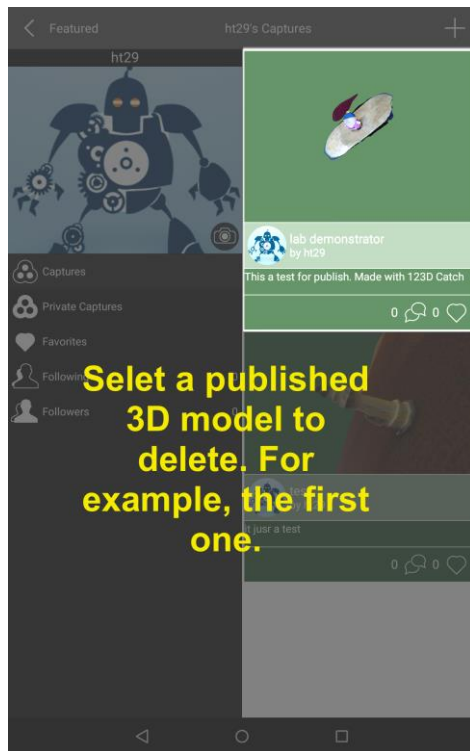
g) Tap the share icon on the 3D model page, and a window with a list of approaches to handle will pop up

h) Select the trash bin with word 'Delete'

i) Select 'Delete' on the pop up confirmation window named 'Delete Capture?' to delete the selected 3D model.
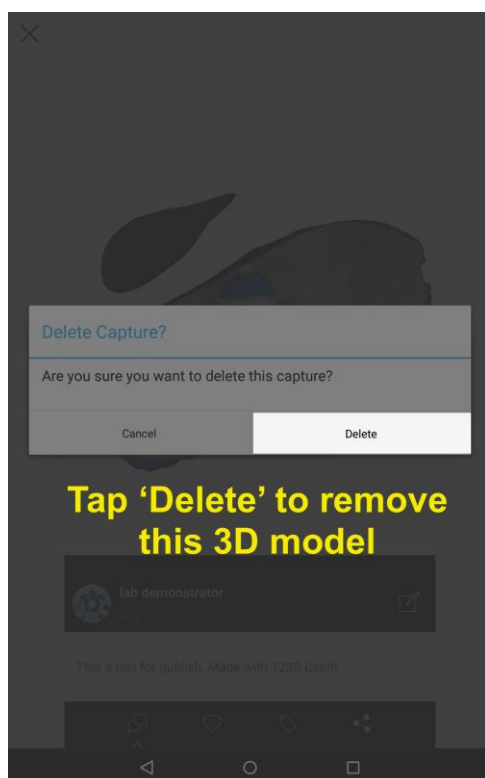
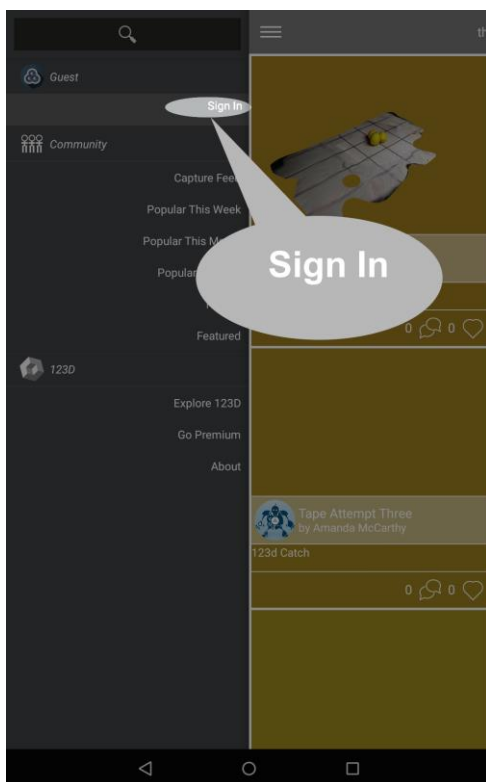# 6. Publish a 3D model
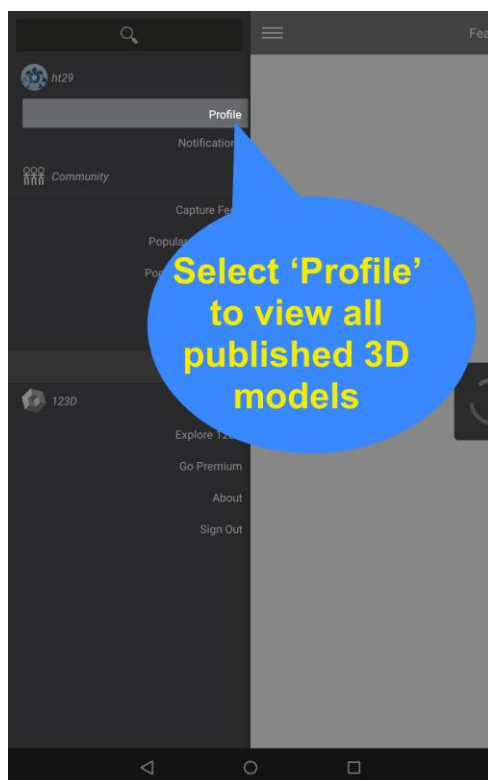
a) Open 123D Catch
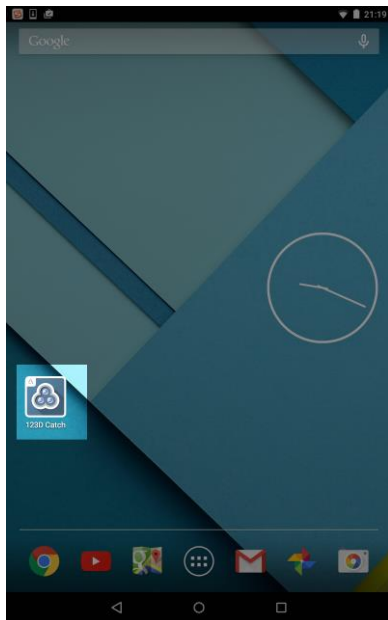
b) Tap the hamburger menu in the upper left corner
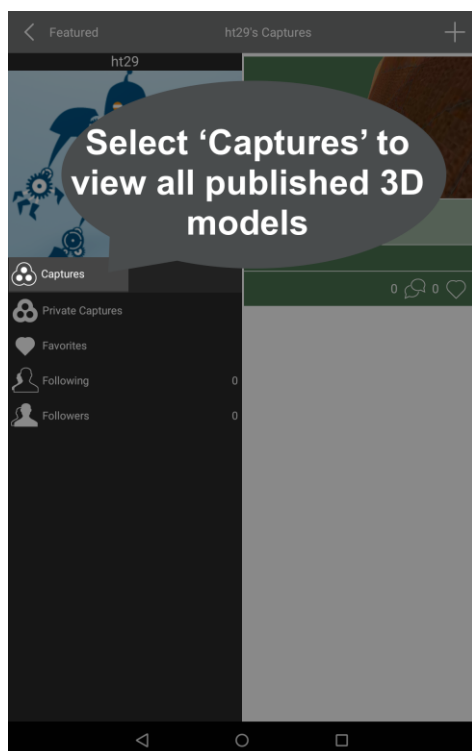

c) Sign in as a user following the step 2
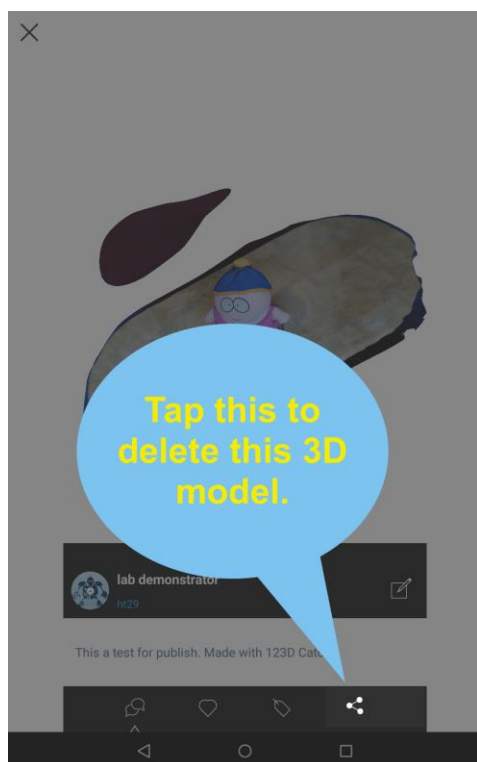
d) Select 'Profile' to view personal page

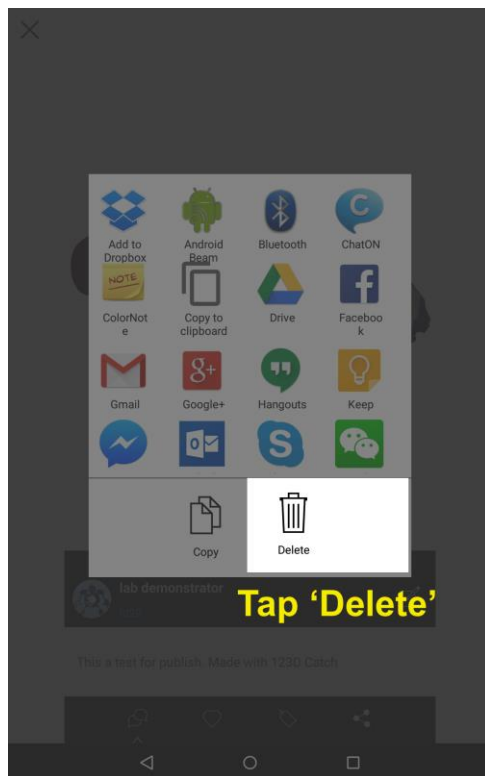e) Select 'Private Captures' to view all unpublished 3D models

f) Select the 3D model to be published on the right side of the screen
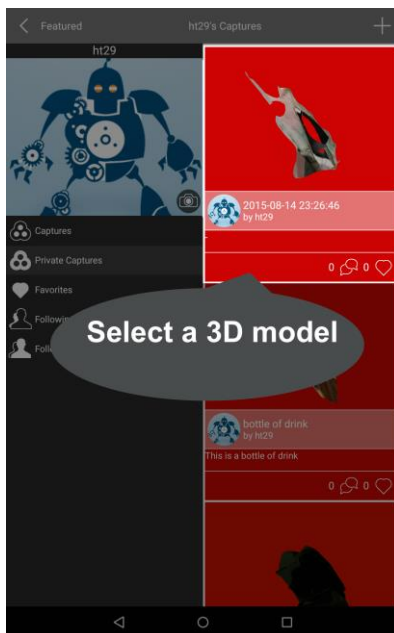
g) Tap the edit icon

h) Select 'Next' in the bottom right corner of the screen

i) Modify the 3D model in the frame, and tap 'Next' at the bottom
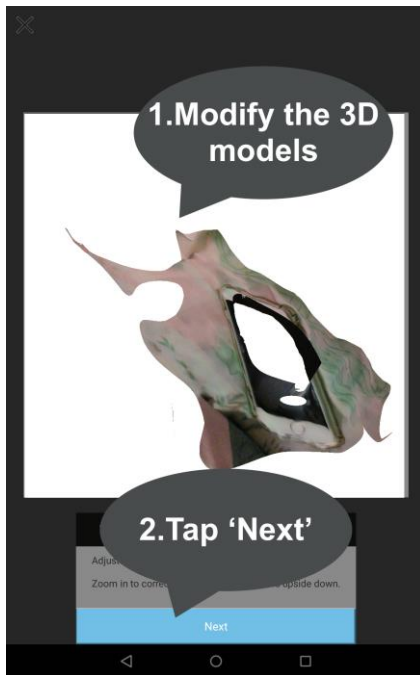
j) Activate the switch button named 'Share'

k) Type in the name, description and tag. And then tap 'Share' to publish the 3D model online
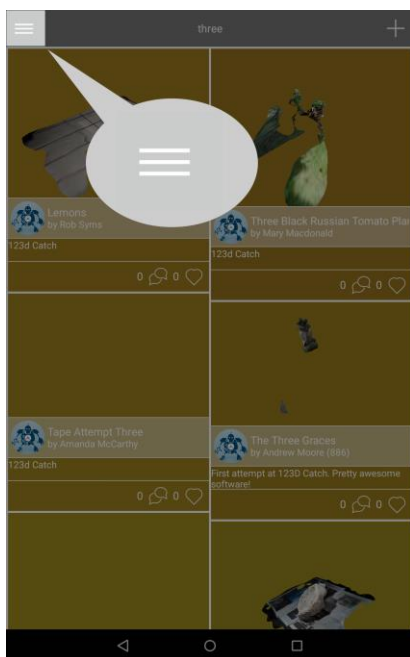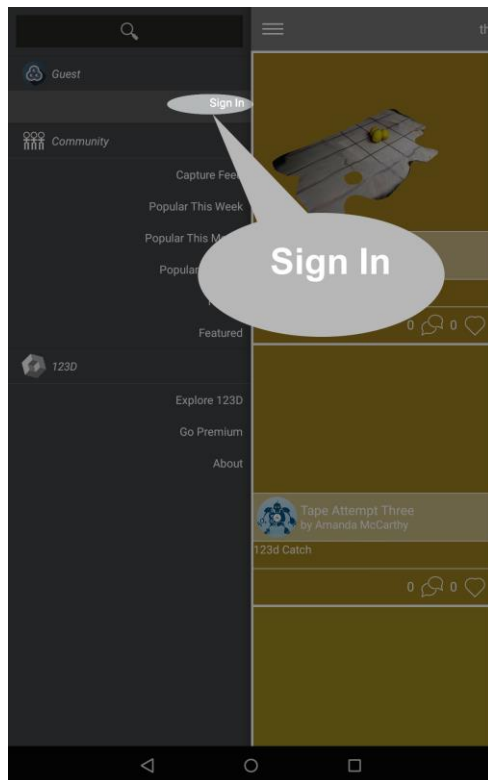
7. Share a 3D model

a) Open 123D Catch
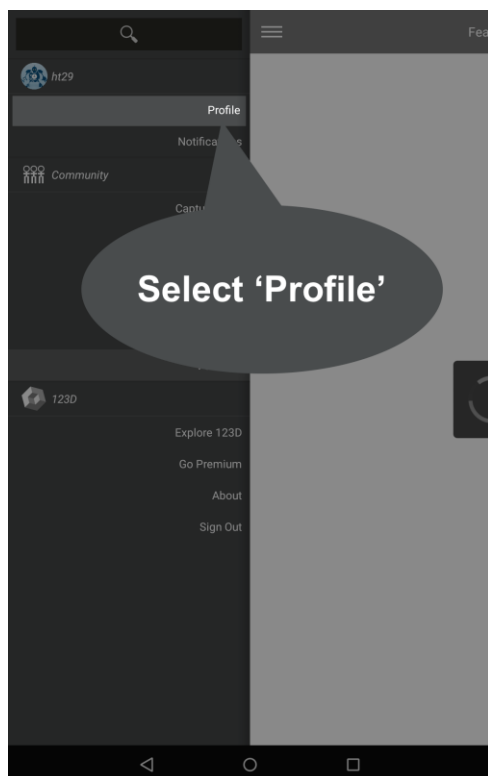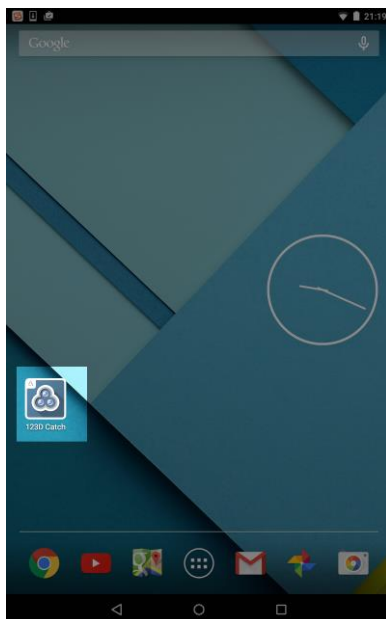

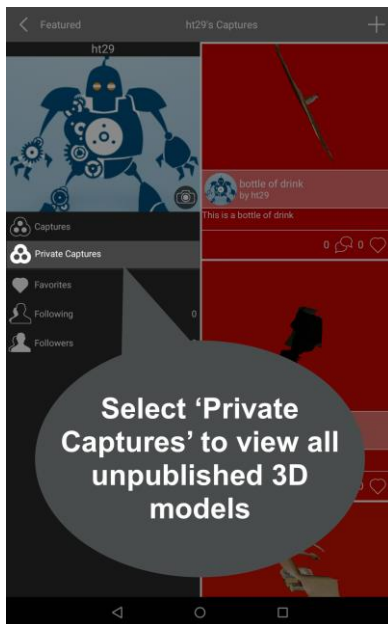b) Tap the hamburger menu (≡) in the upper left corner
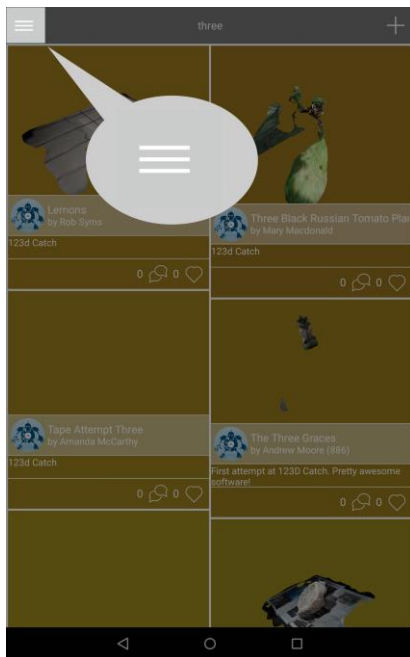
c) Sign in as a user following the steps in 2
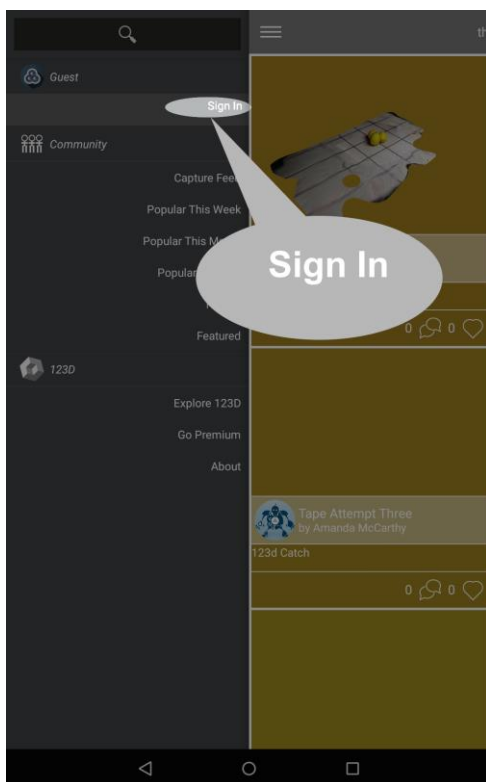
d) Select 'Profile'

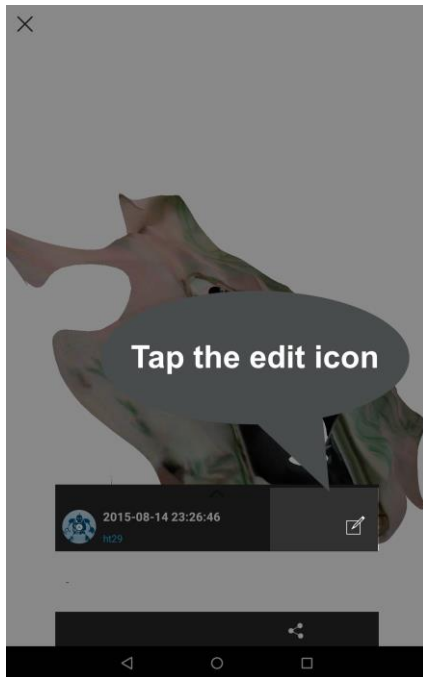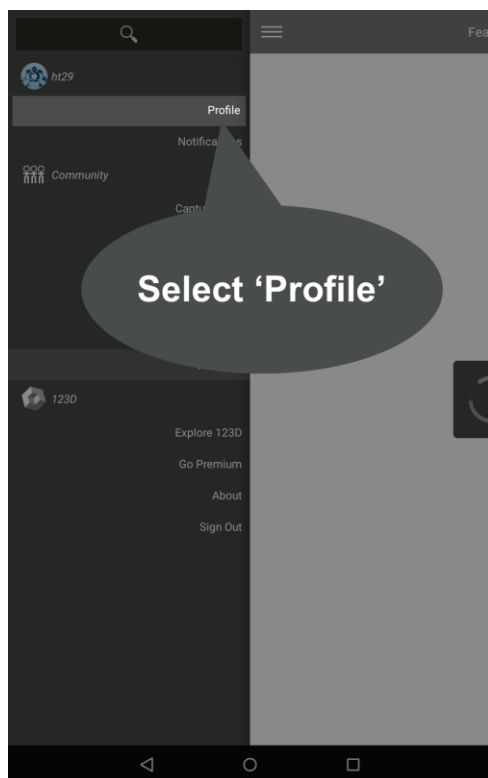e) Select 'Captures' to view all published 3D models
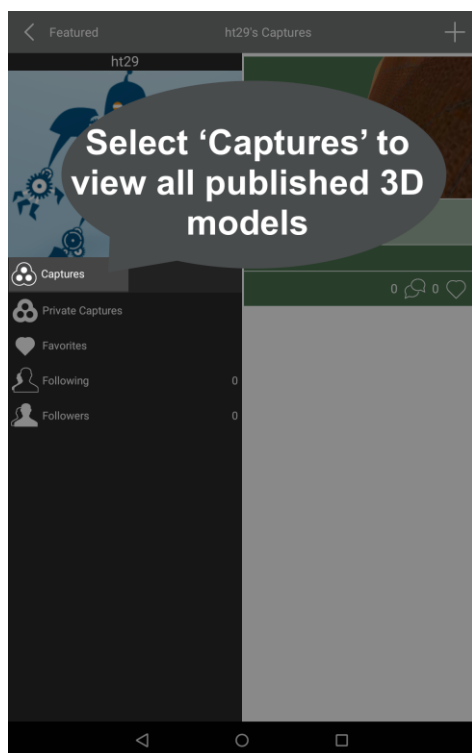
f) Select one 3D model to be shared on the right side
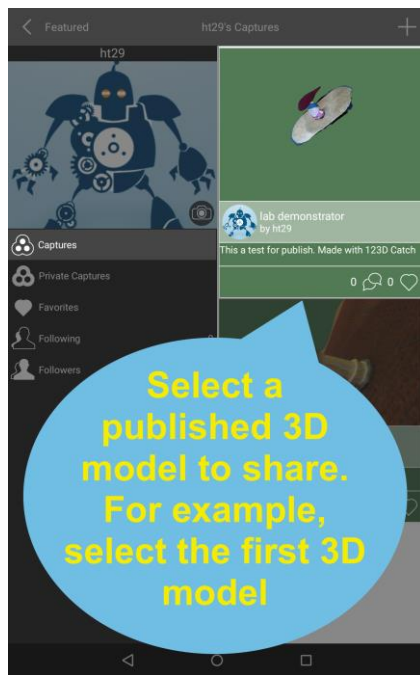
g) Tap the share icon
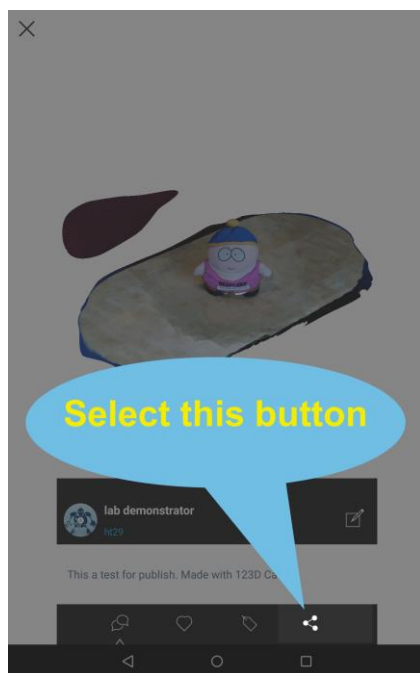
h) Select one social network on the popped up window. For example, Facebook
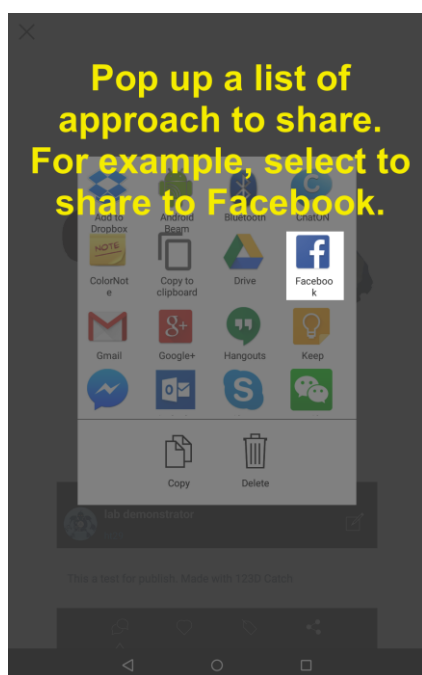
i) Sign in the social network application, Facebook.

j) Add a description and set features. And then tap 'Post' to share
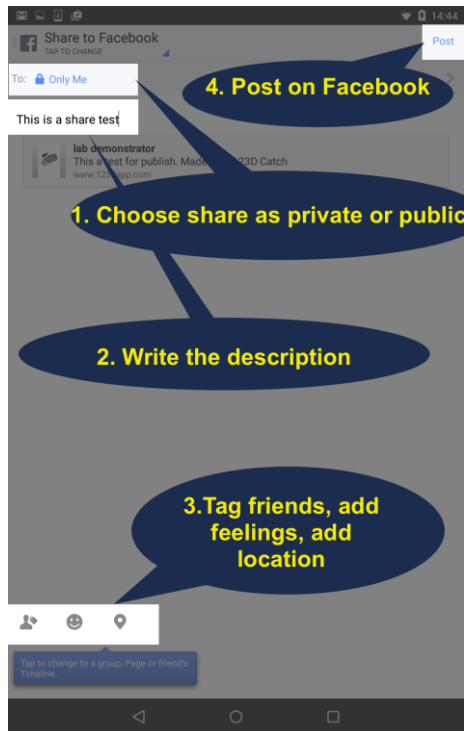
8. Upload a own 3D model on Omeka platform

Omeka is a platform for presenting collections and exhibitions in library and museums [1]. The following steps describe how to upload a 3D model on Omeka. You should have an account for Omeka platform and an account for 123D Catch at first.

a) Open the official website of 123D Catch with the following link
   http://www.123dapp.com/catch

b) Click 'SIGN IN' in the upper right side of the webpage
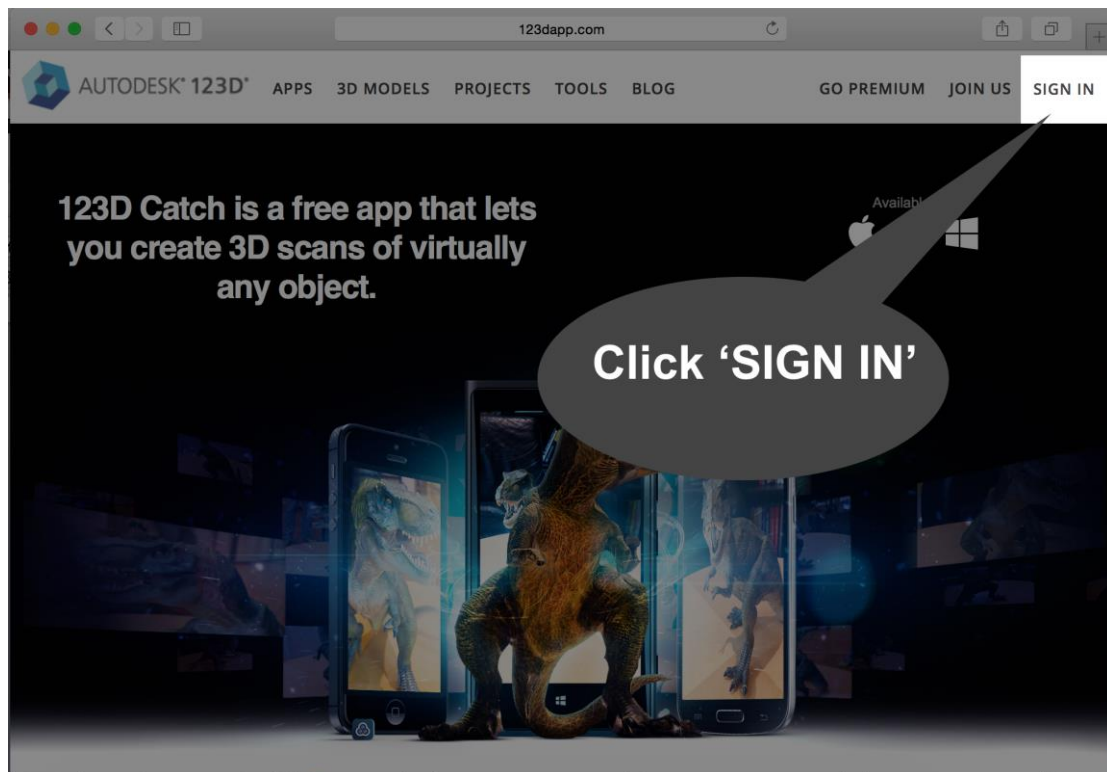
c) Sign in with Facebook, Autodesk ID or Email Address with Password
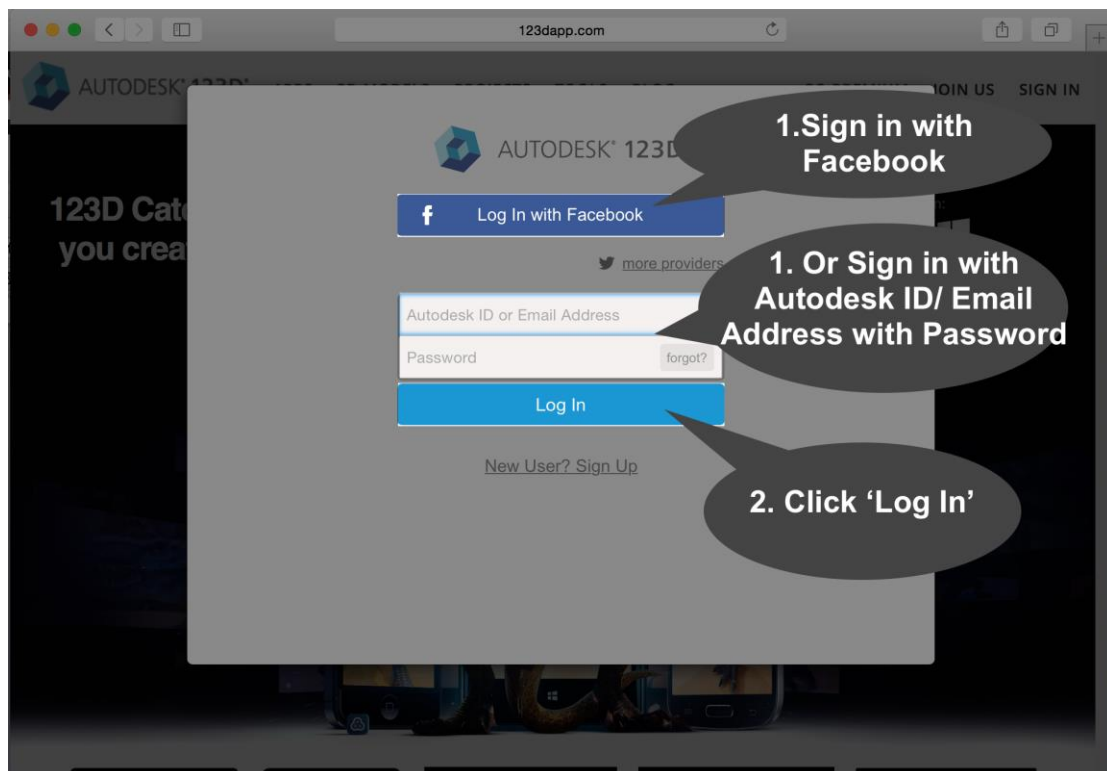
d) Click 'ME' in the upper right corner of the webpage
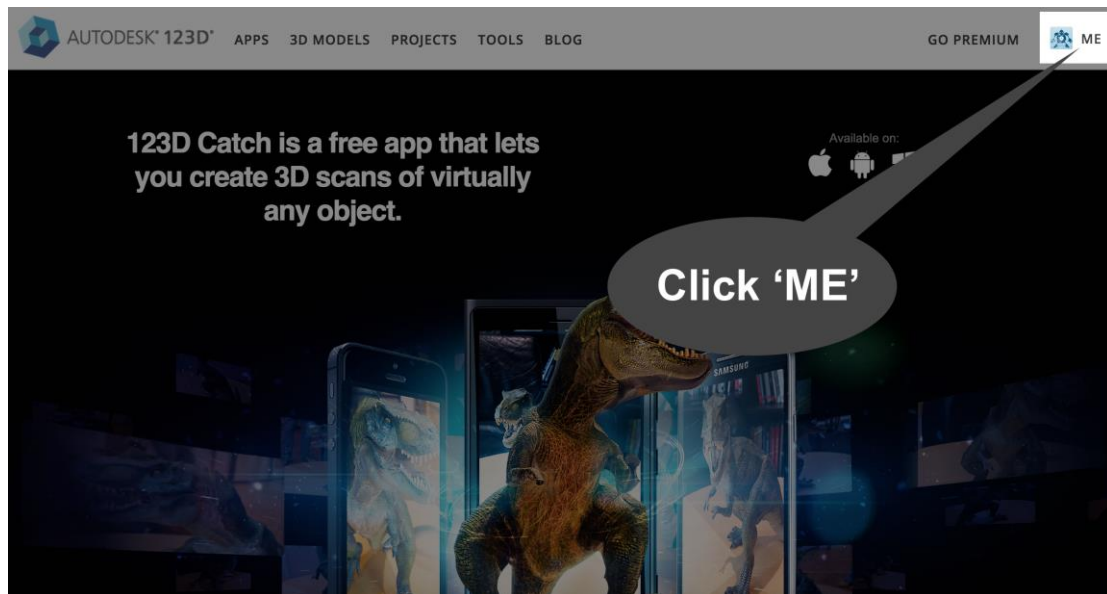
e) Select 'Models' on the left side navigation bar
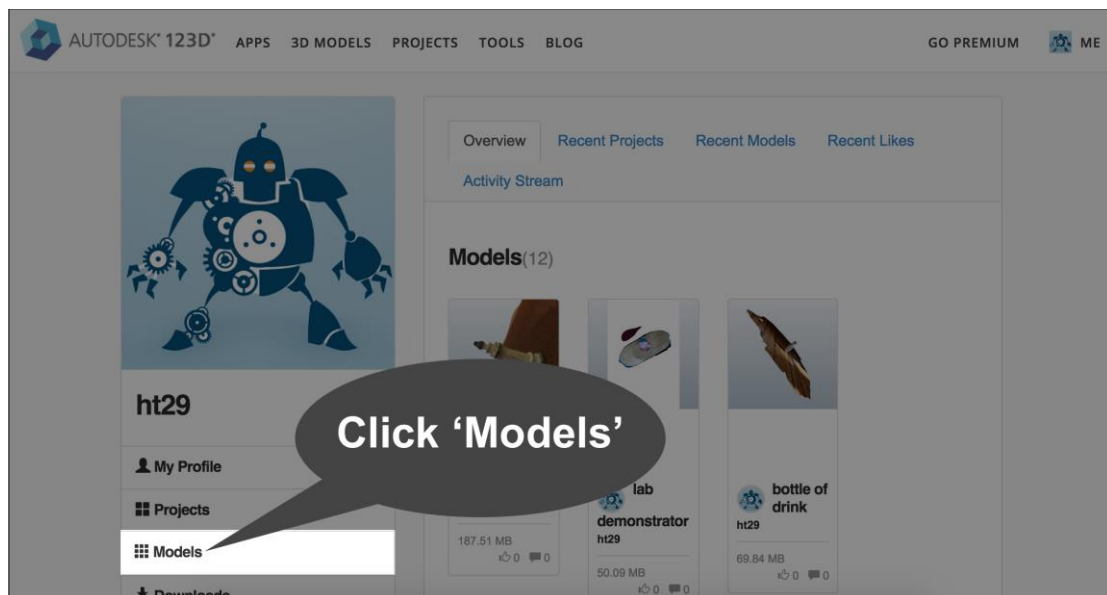
f) Select a 3D model on the right side of the webpage
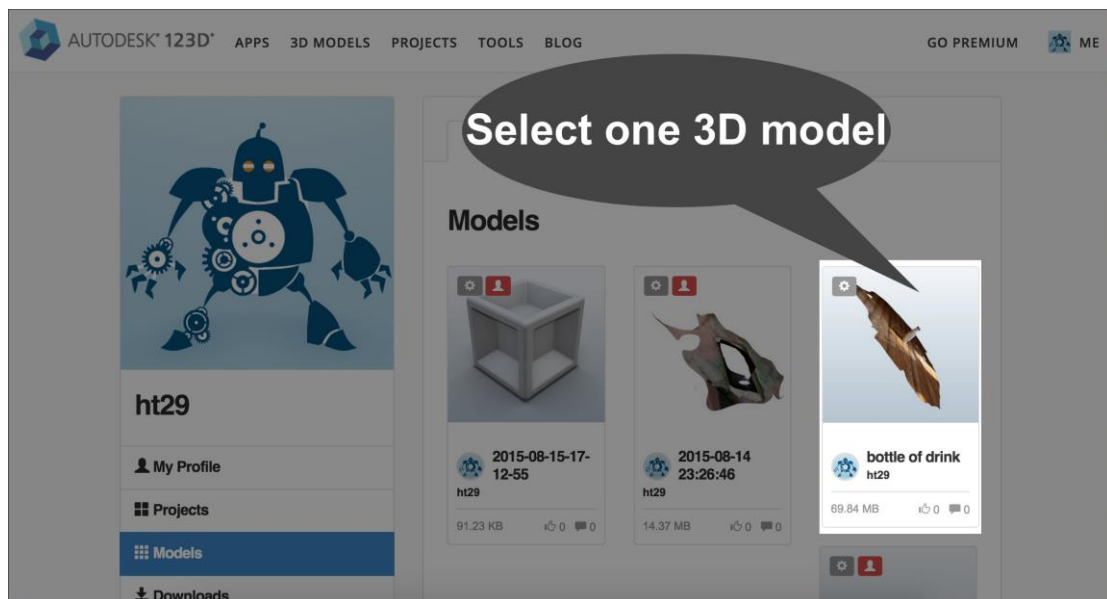
g) Click the button 'Edit/Download' on the right side of the webpage

h) Select the option 'Download 3D Models'
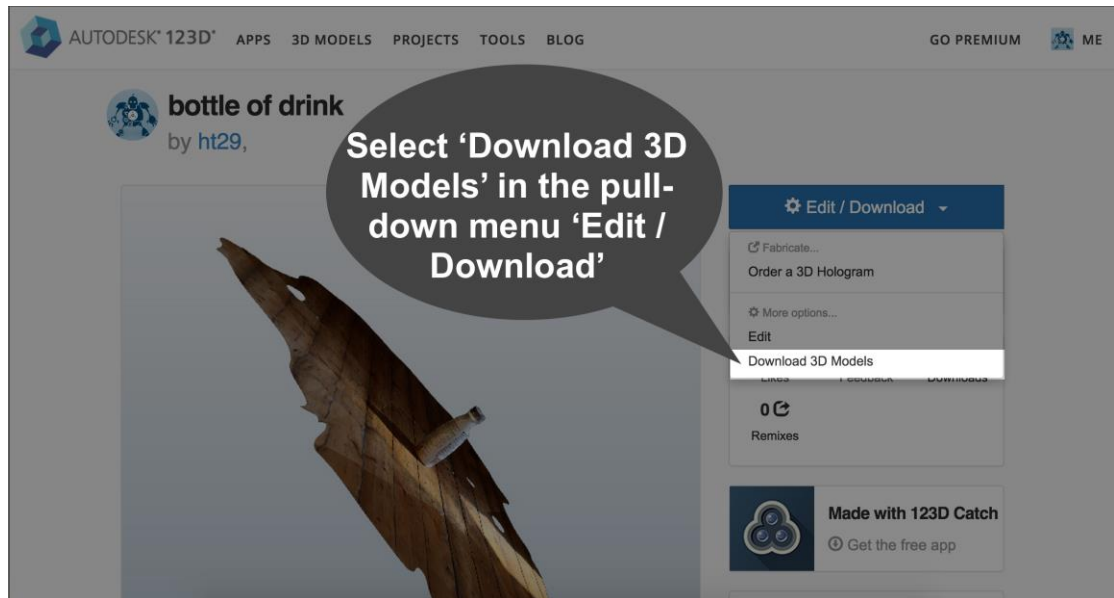
i)   Choose all options and click the button 'Download Models' in the bottom right
     corner of the pop up window
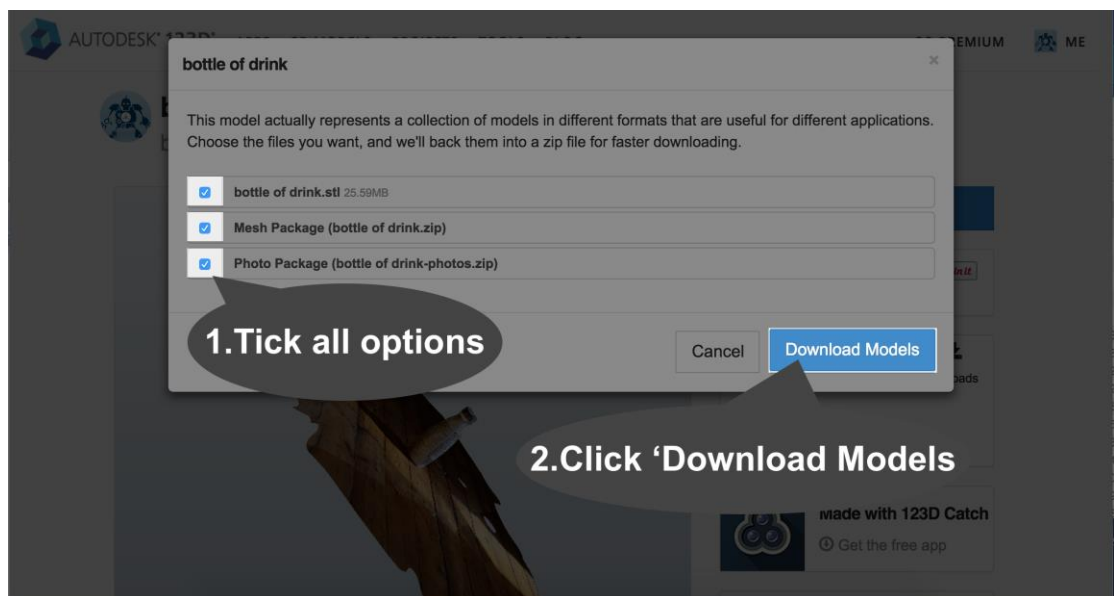
j)   Select a directory to store, such as Desktop. The download file is a zip
     document

k)   Open the directory and decompress the download file in the same directory,
     which is desktop
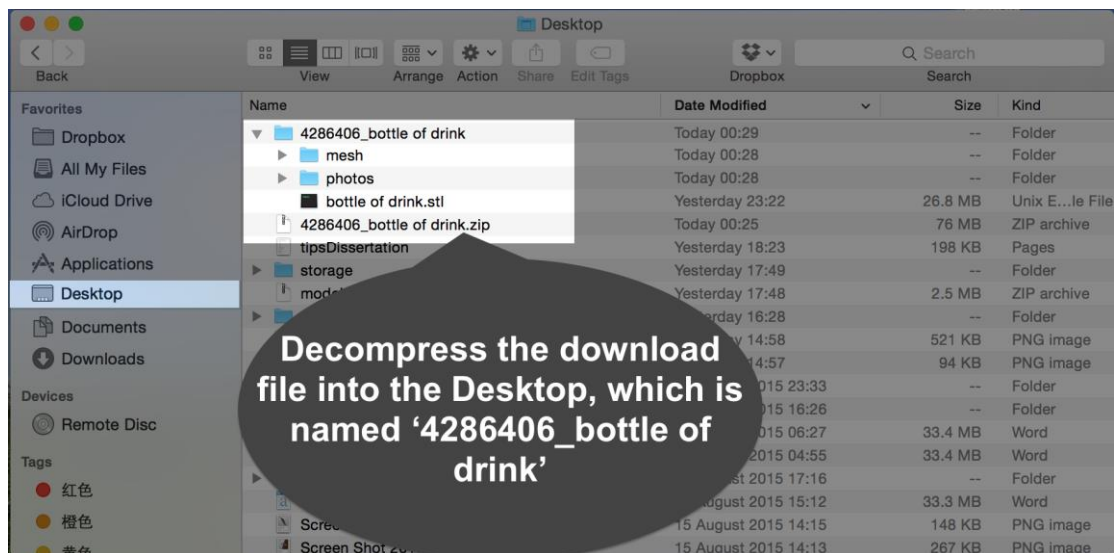
l) Open the system created on Omeka platform, such as Open Virtual Worlds. Log in with username and password. The following is the link to log in

http://openvirtualworlds.org/omeka/admin/users/login
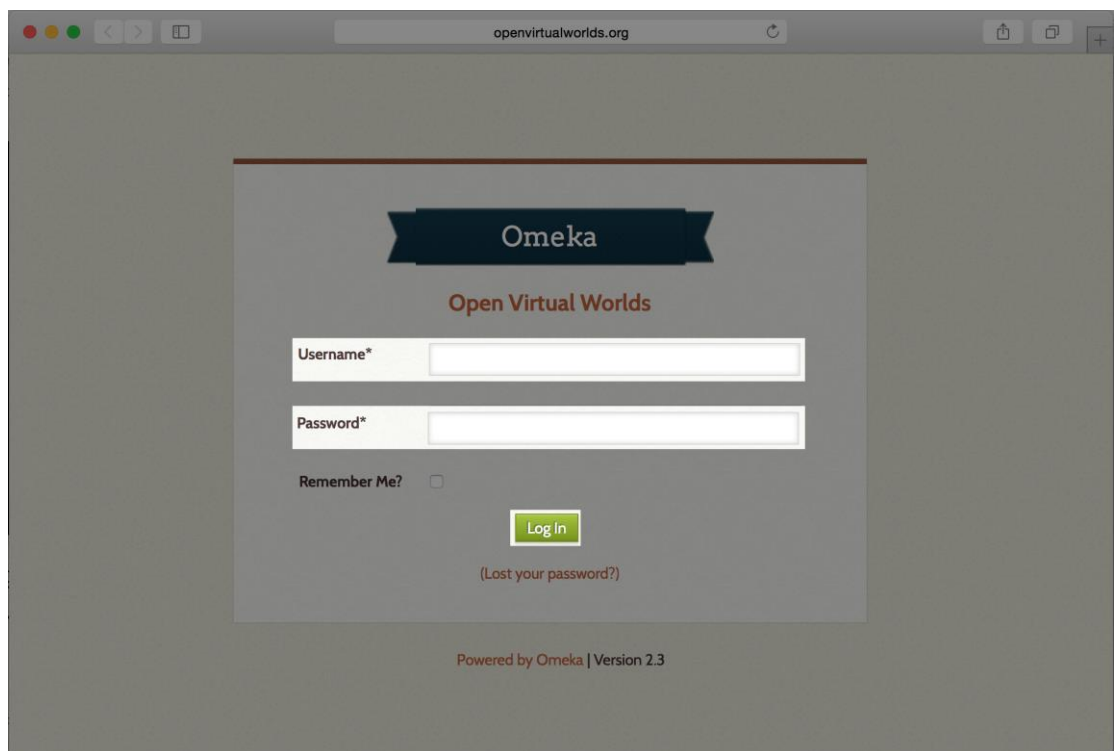
m) Select 'Items' on the left side navigation bar
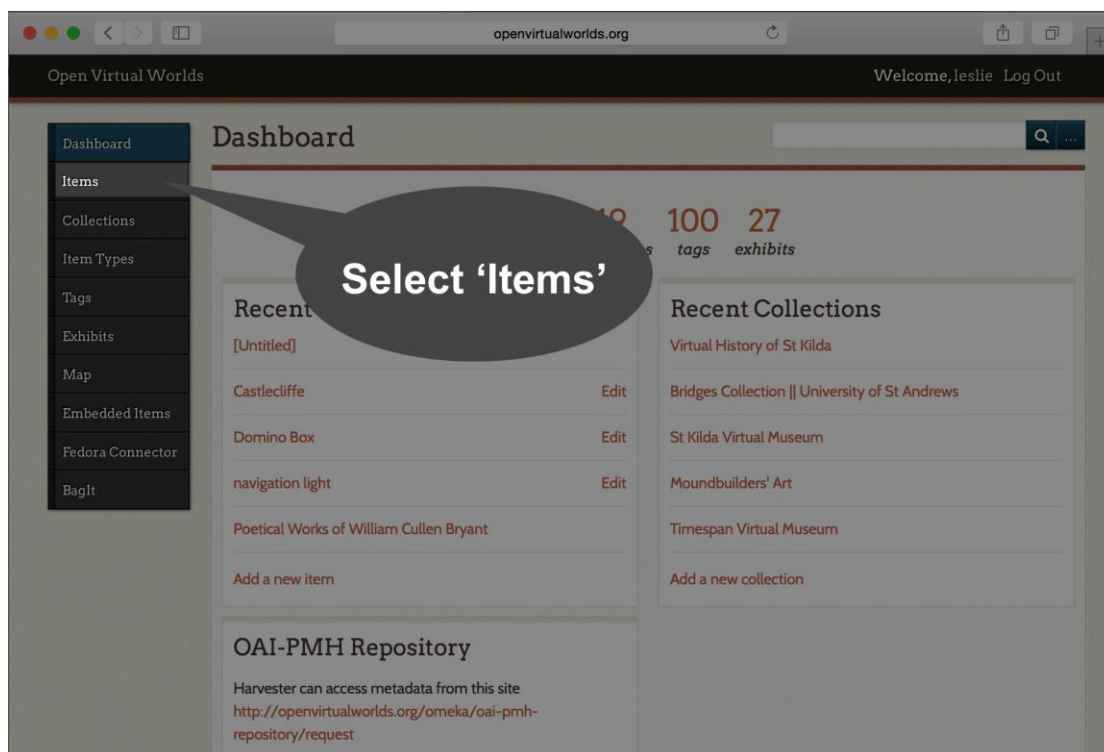
n) Click the button 'Add an Item'
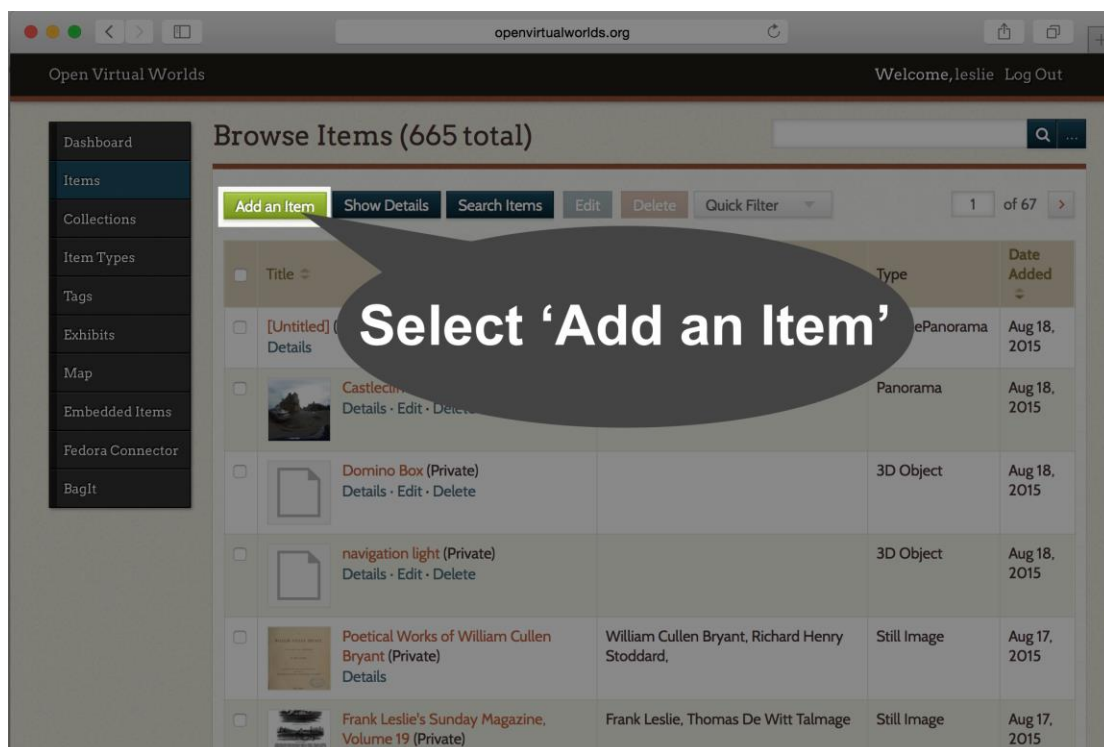
o) Click the button 'Dubin Core' and type in the name of the 3D object. For example, name the 3D object as 'a bottle of drink'
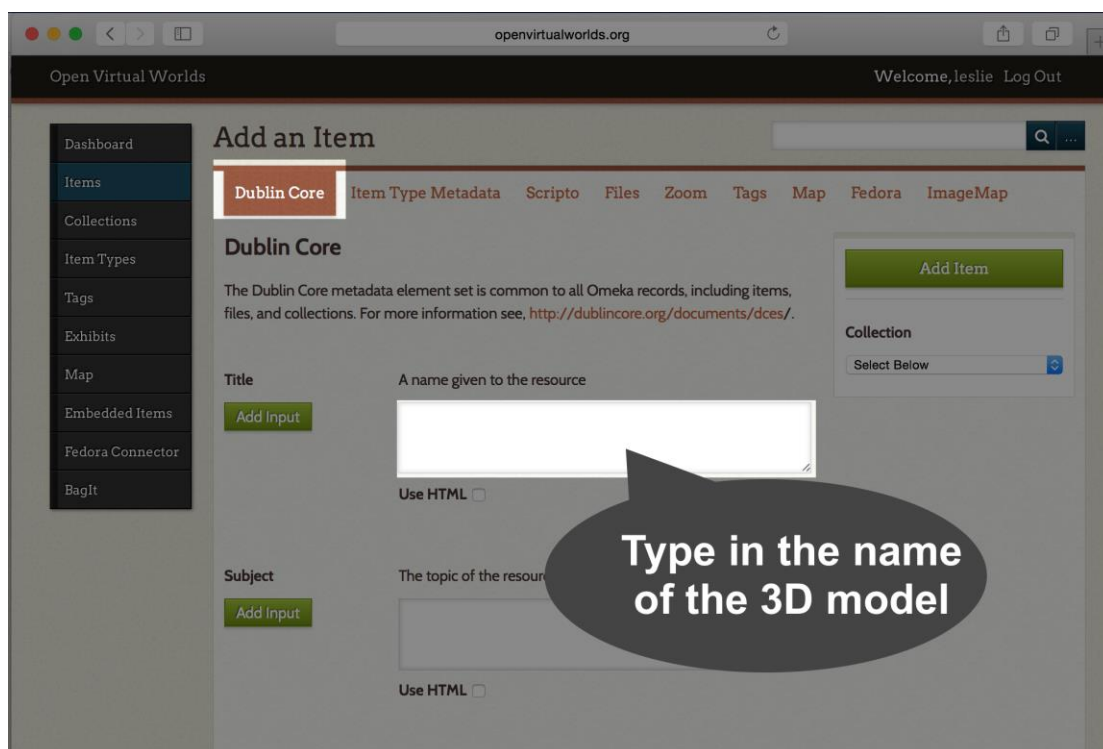
p) Select the button 'Item Type Metadata', and click the pull-down menu beside 'Item Type', then choose '3D Object'
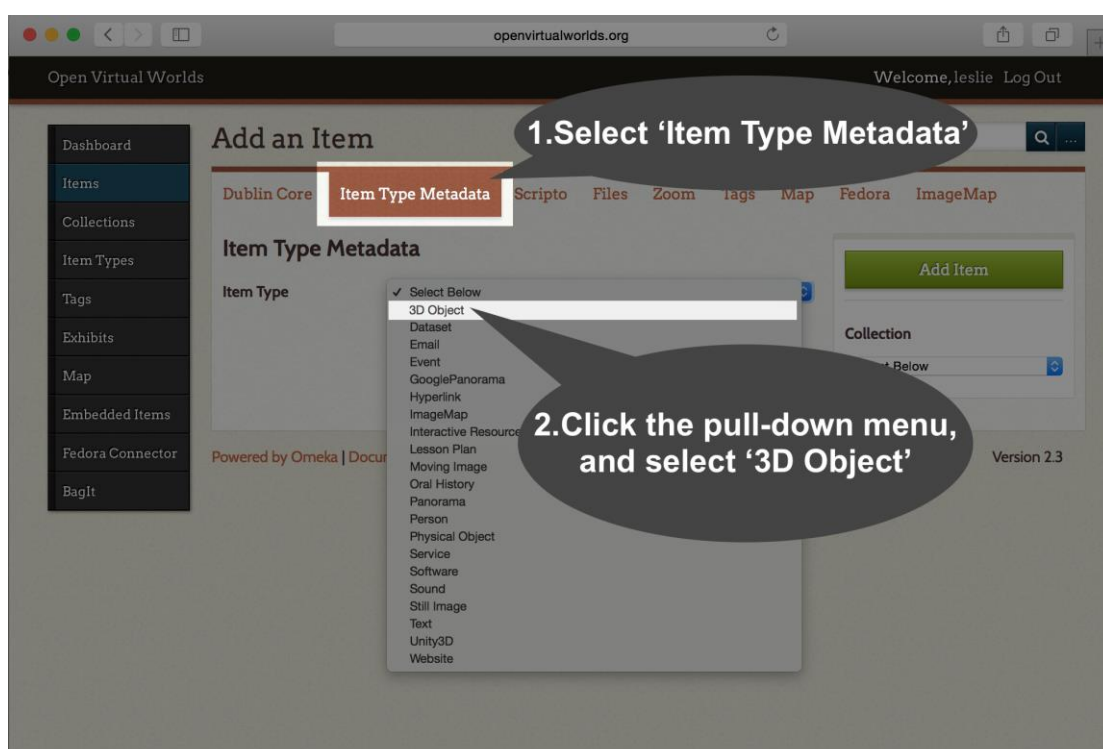
q) Select the button 'Files'
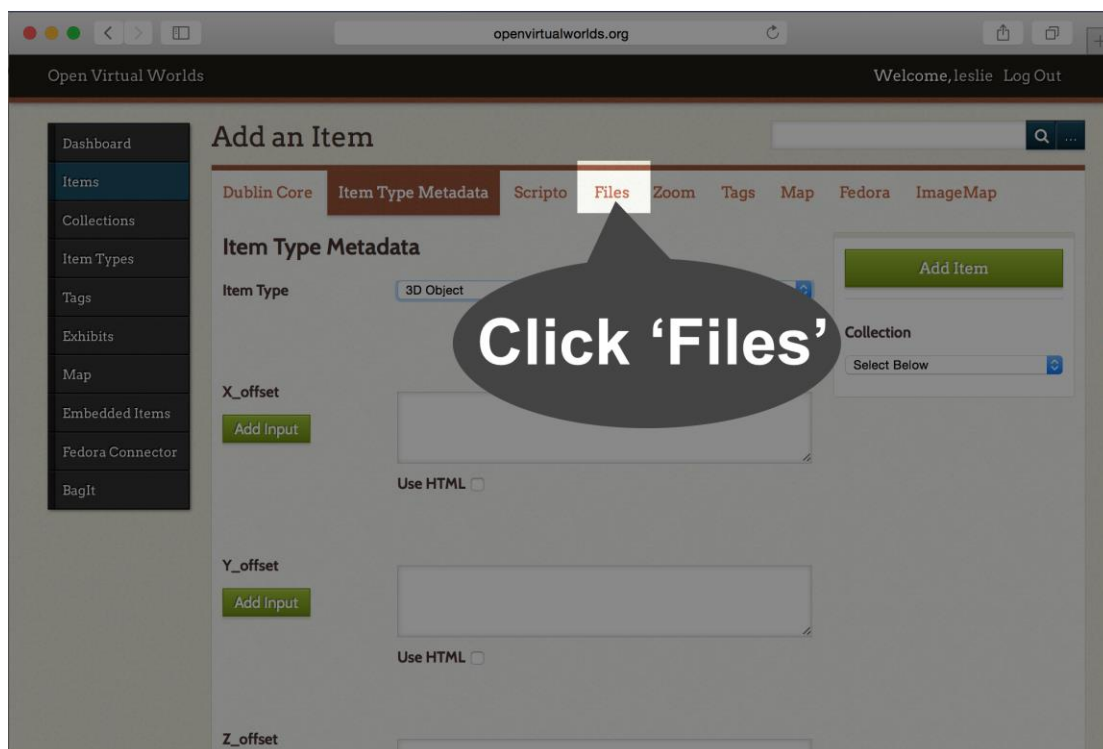
r) Click the button 'Choose File' in the frame
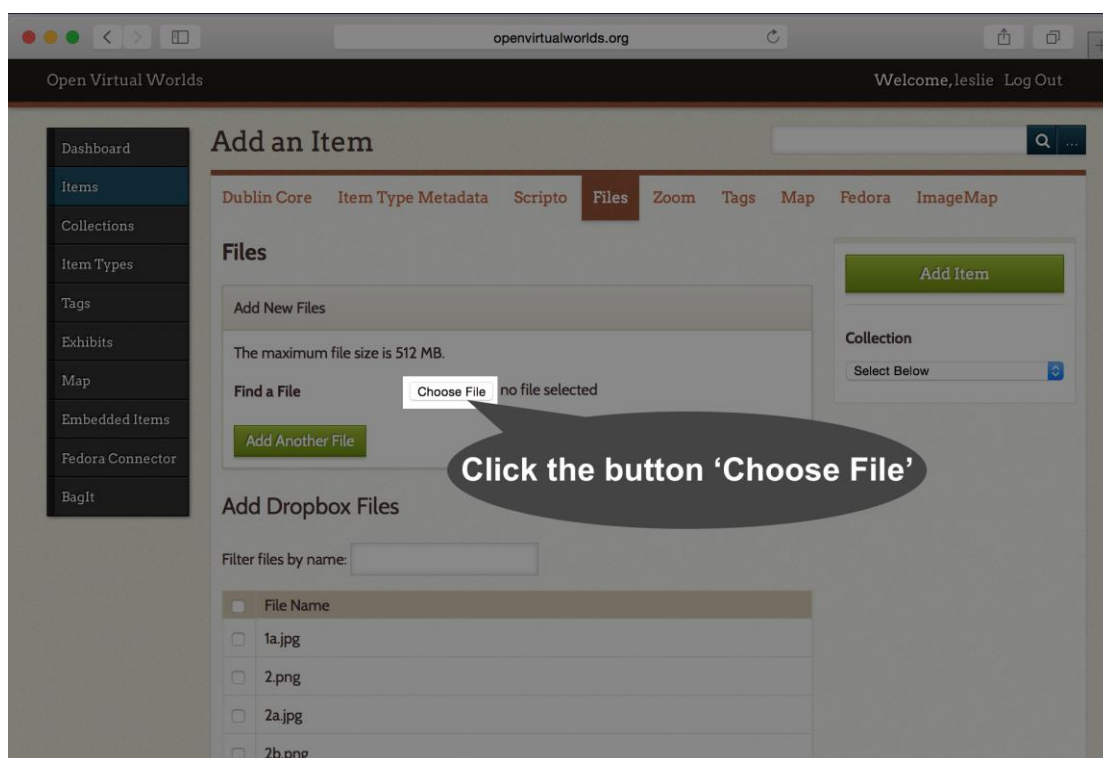
s) Choose the decompressed file in the pop up window, and go into the file named 'mesh'. Choose the document with the type '.obj'. In other words, choose the document with the suffix '.obj'. Then click the button 'Choose' in

the bottom right corner in the pop up window
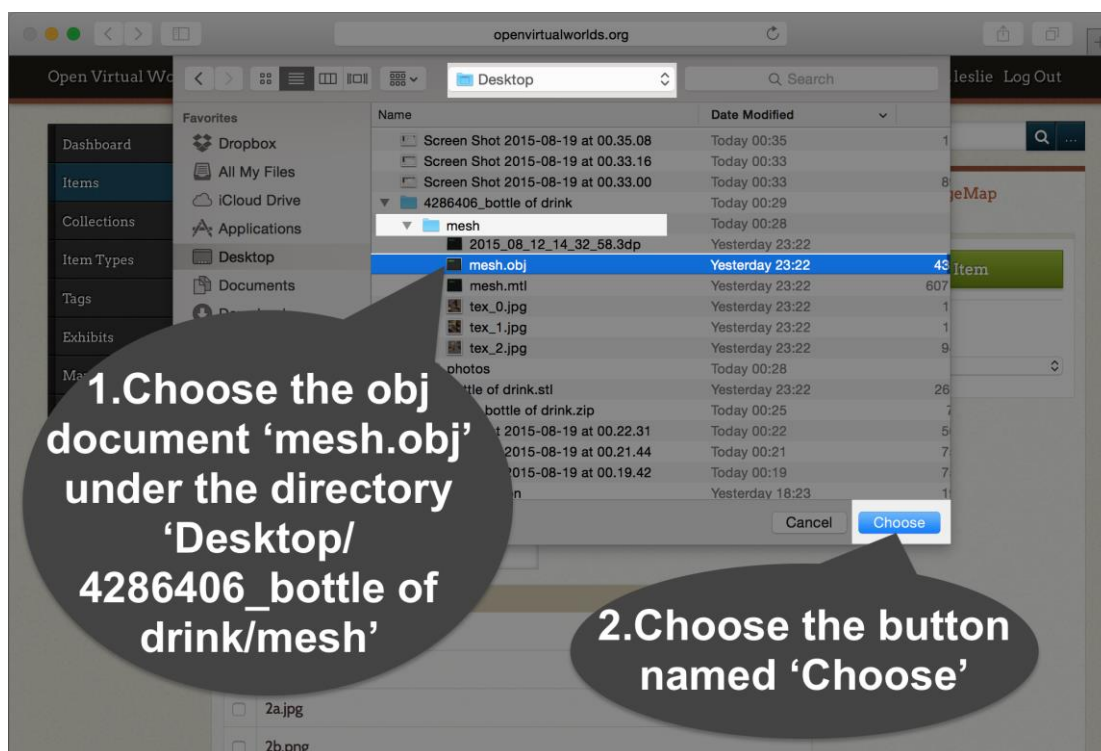
t) Click the button named 'Add Another File'
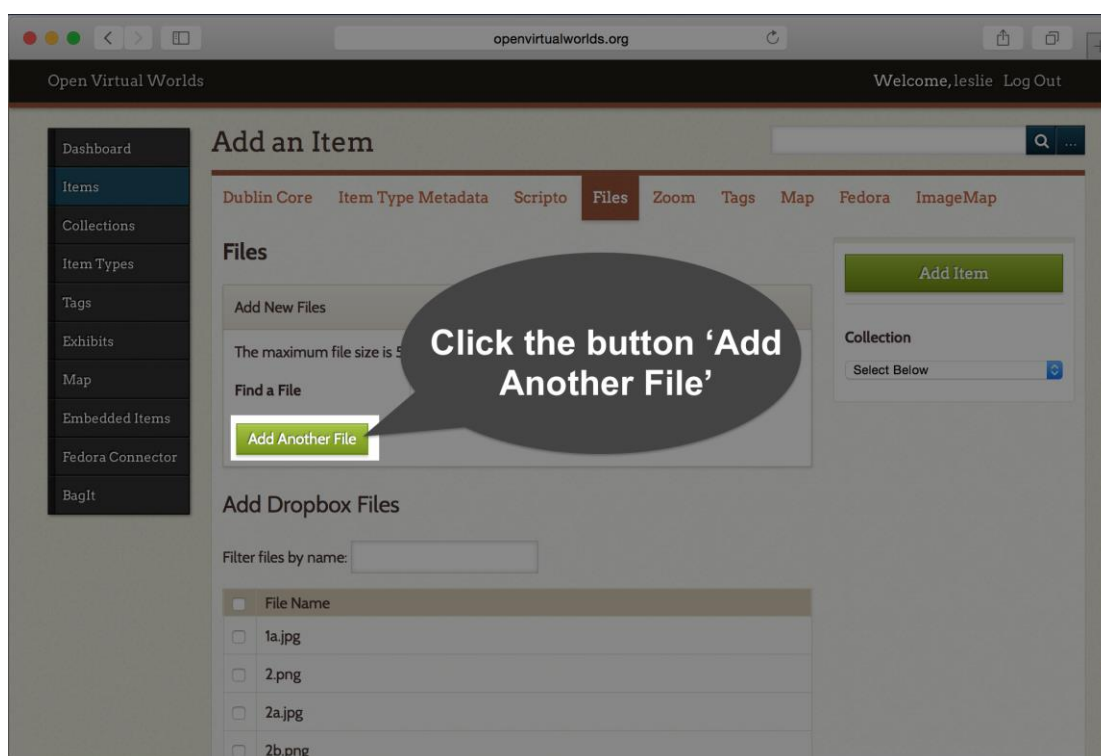
u) Repeat the step r and step s, but choose the document with the type '.mtl'
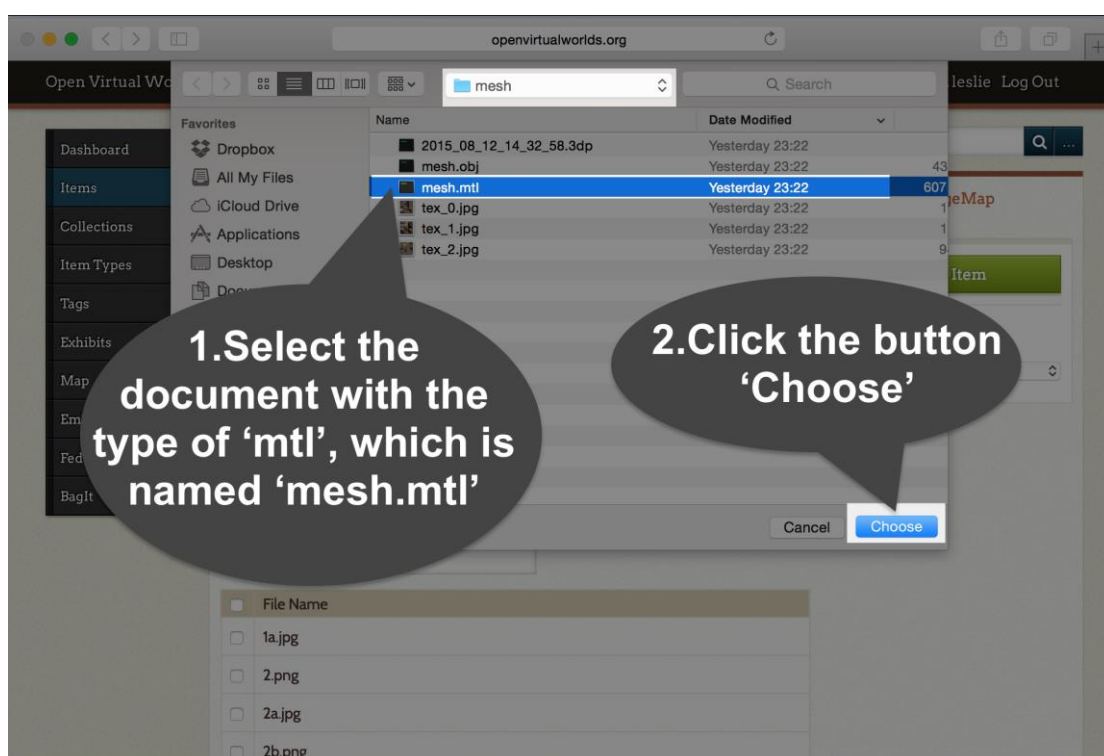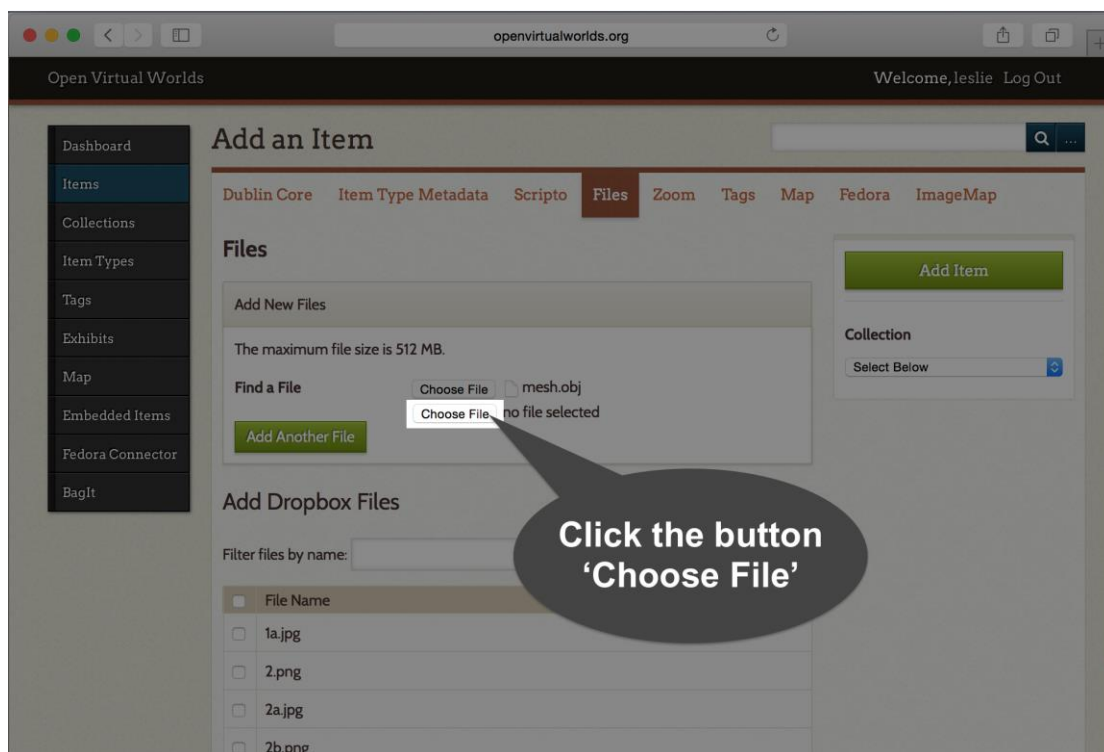
v) Click the button called 'Add Another File', and repeat the step r and step s to choose the remaining documents in this 'mesh' file
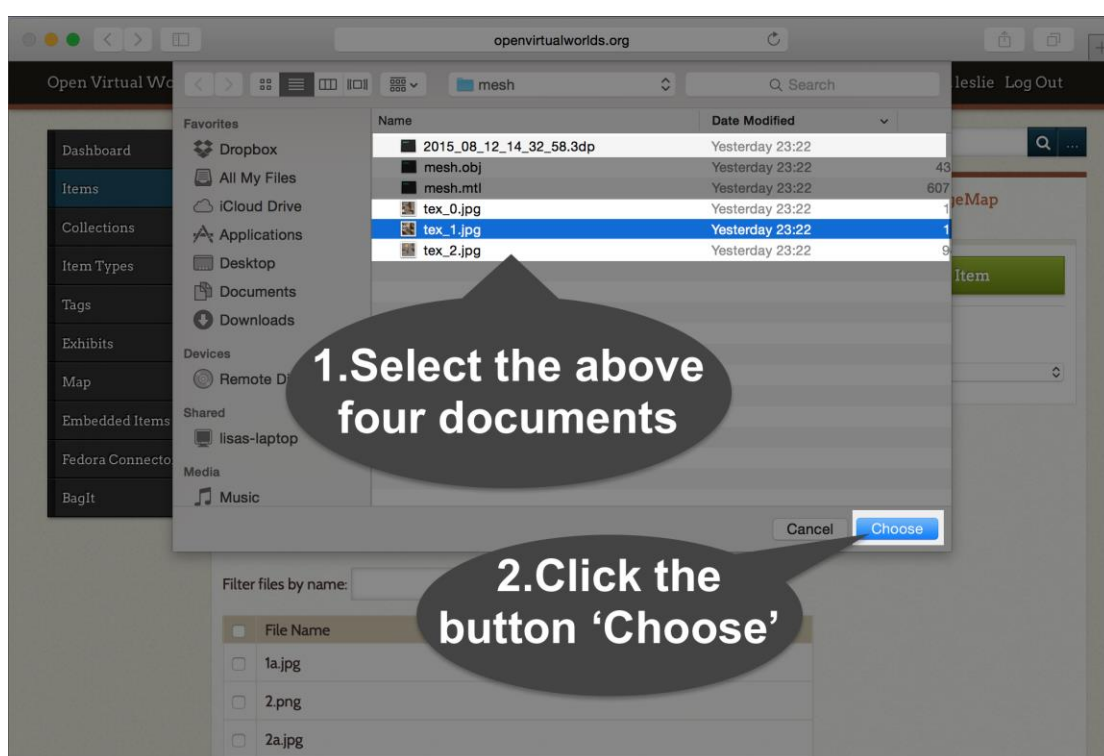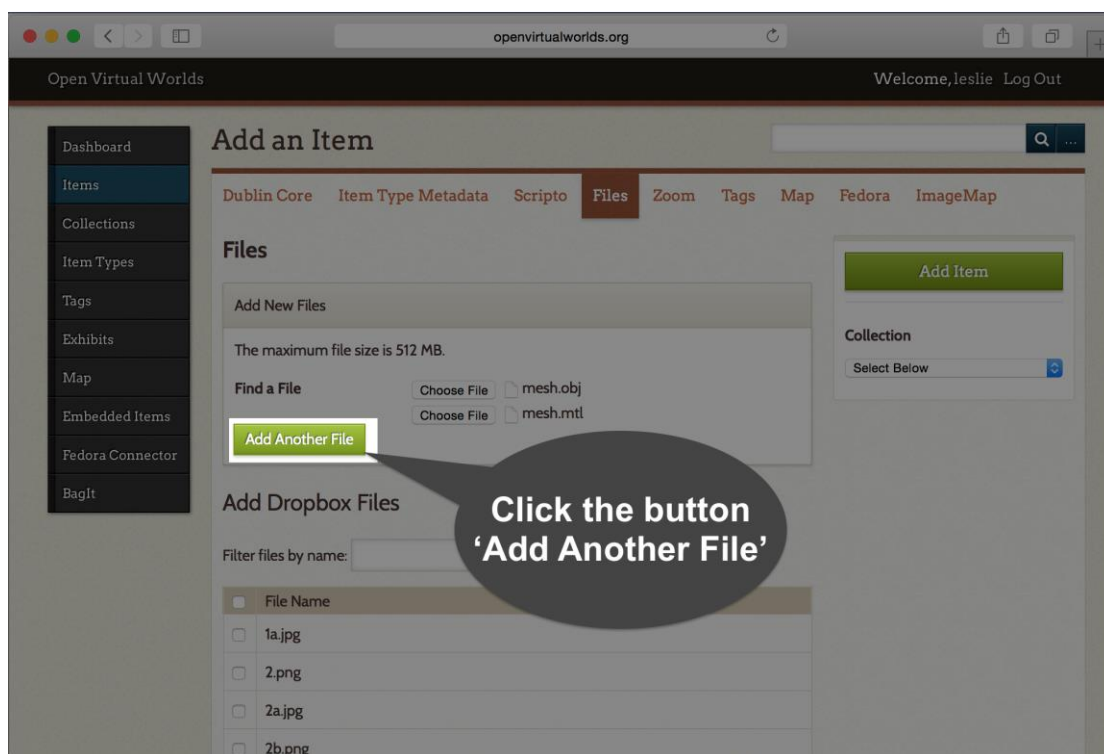
w) Repeat the step r and step s, until there is no more documents in the 'mesh'
directory
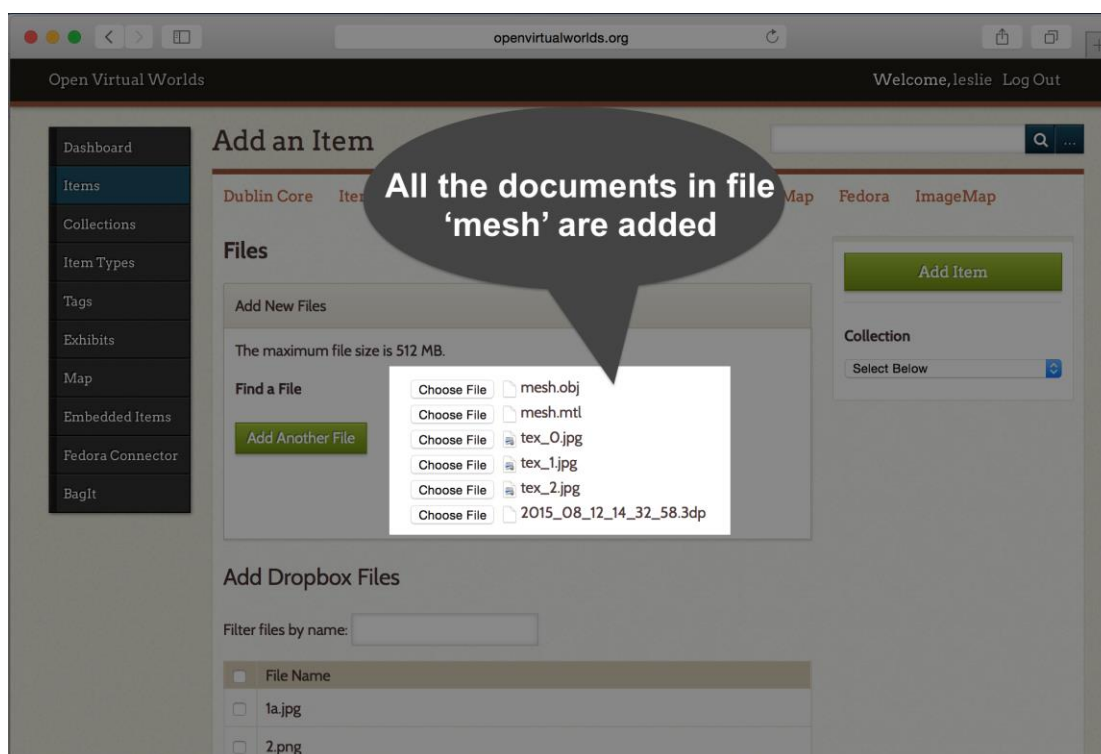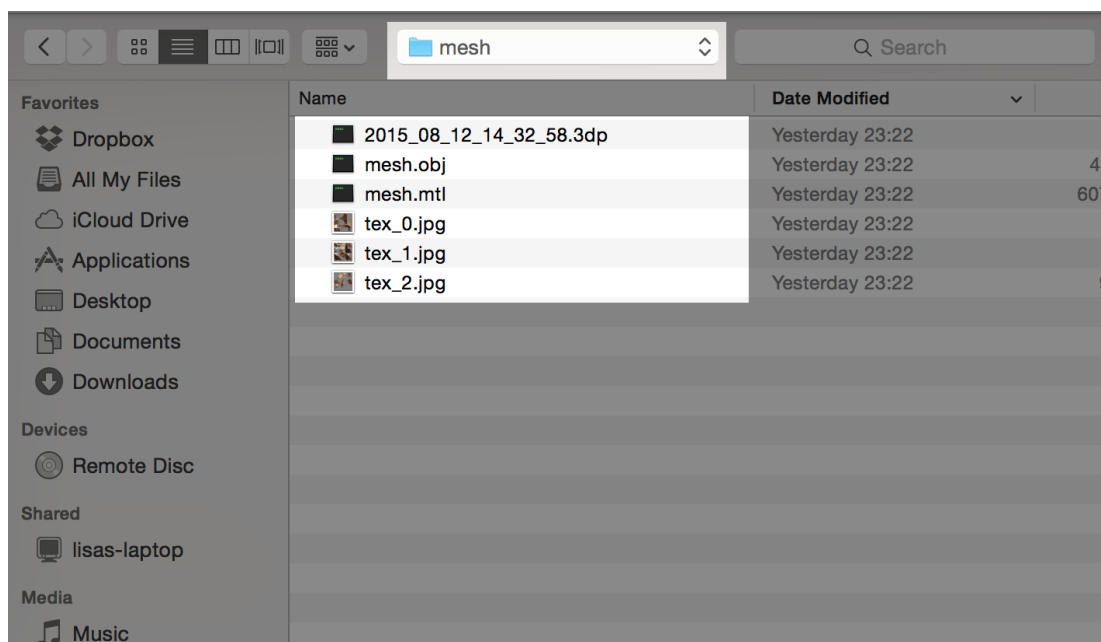
x) Click the button 'Add Item' on the right side of the webpage, and wait for several minutes. During this time, do not reload or close the webpage
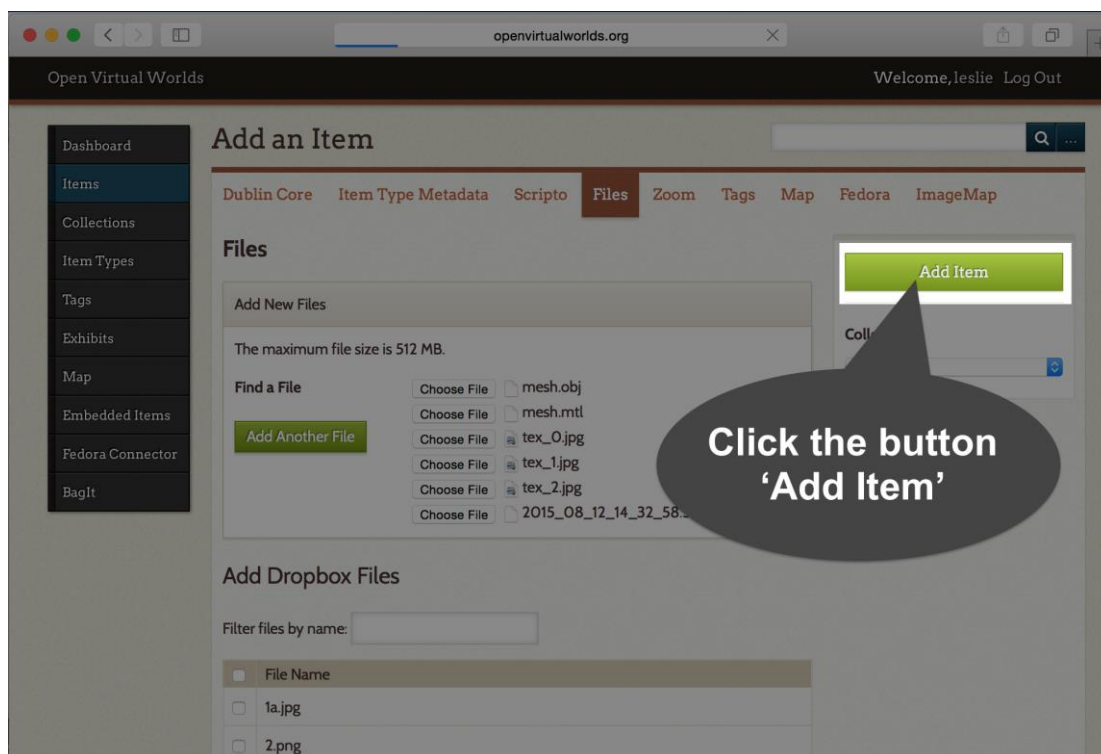
9. View a 3D model on Omeka platform

An account for Omeka platform is necessary.

a) Open the system created on Omeka platform, such as Open Virtual Worlds.
   Log in with username and password. The following is the link to log in
   http://openvirtualworlds.org/omeka/admin/users/login
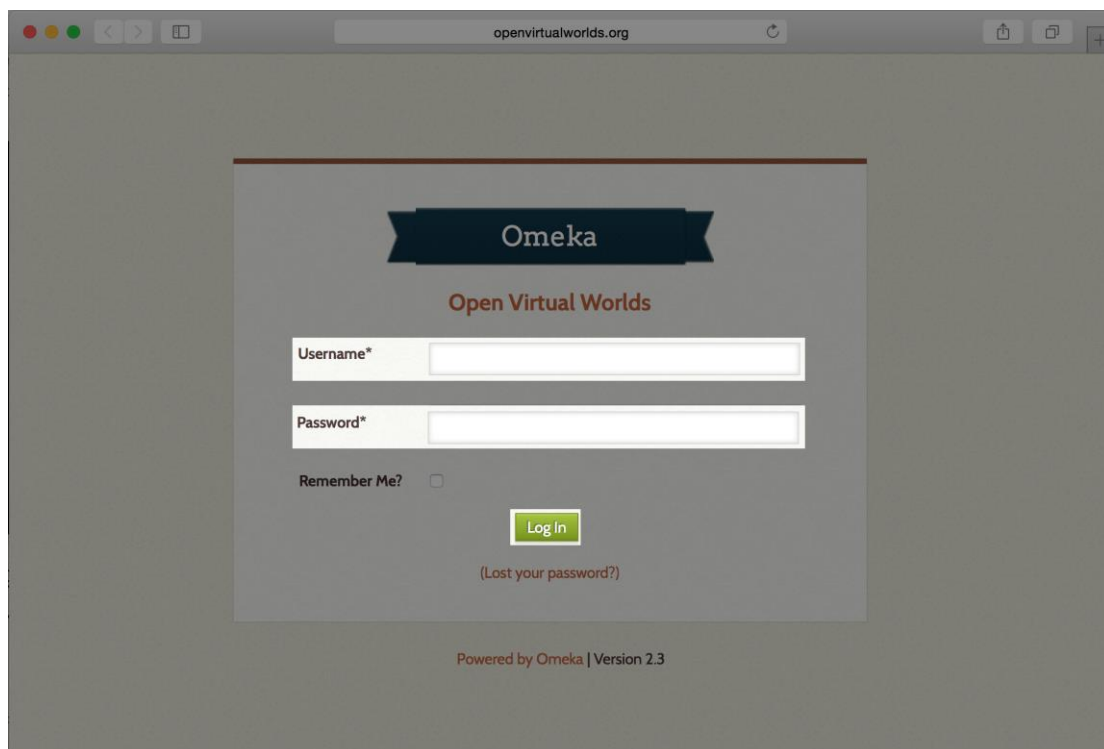
b) Select 'Items'

c) Select a 3D model with the type of '3D Object'
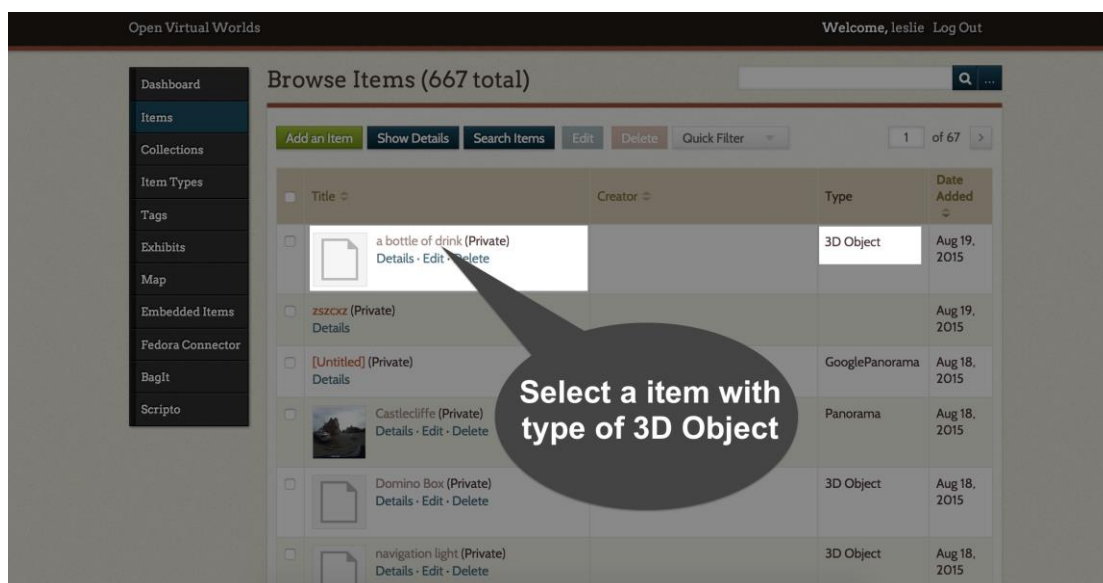
d) Click the button 'View Public Page'
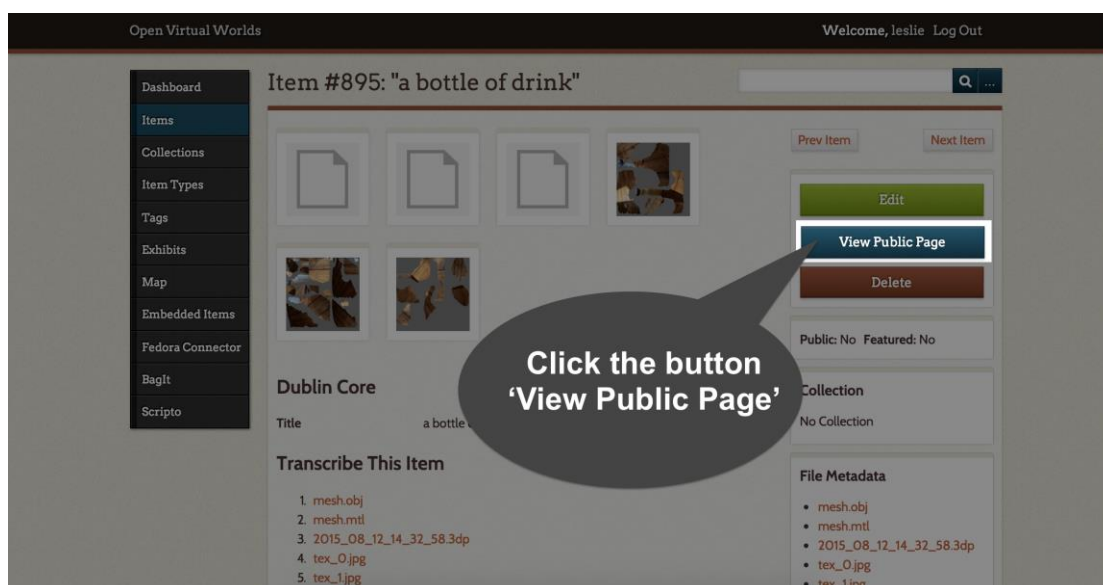
e) It takes several minutes to load the 3D model. Wait until there is a platform in the frame
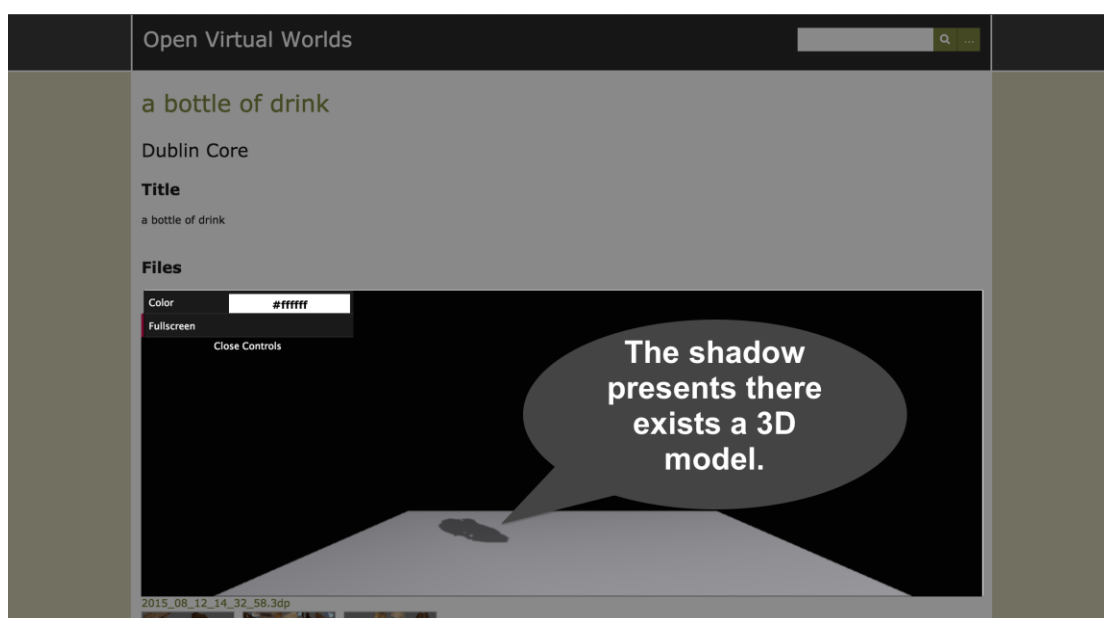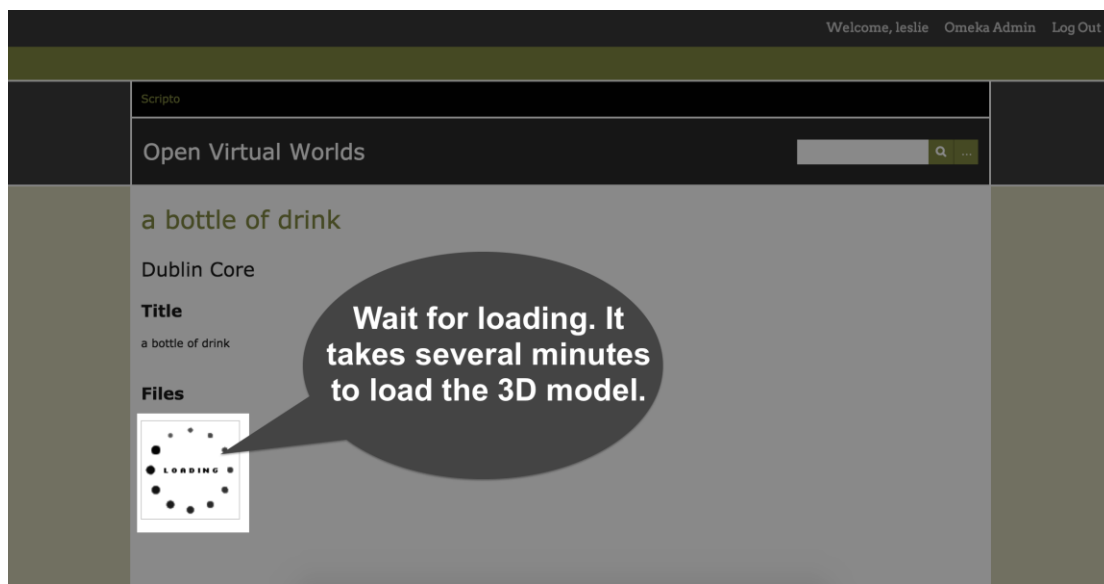
f) Modify the scale and angle by zooming in / zooming out and drag and drop to view the 3D model
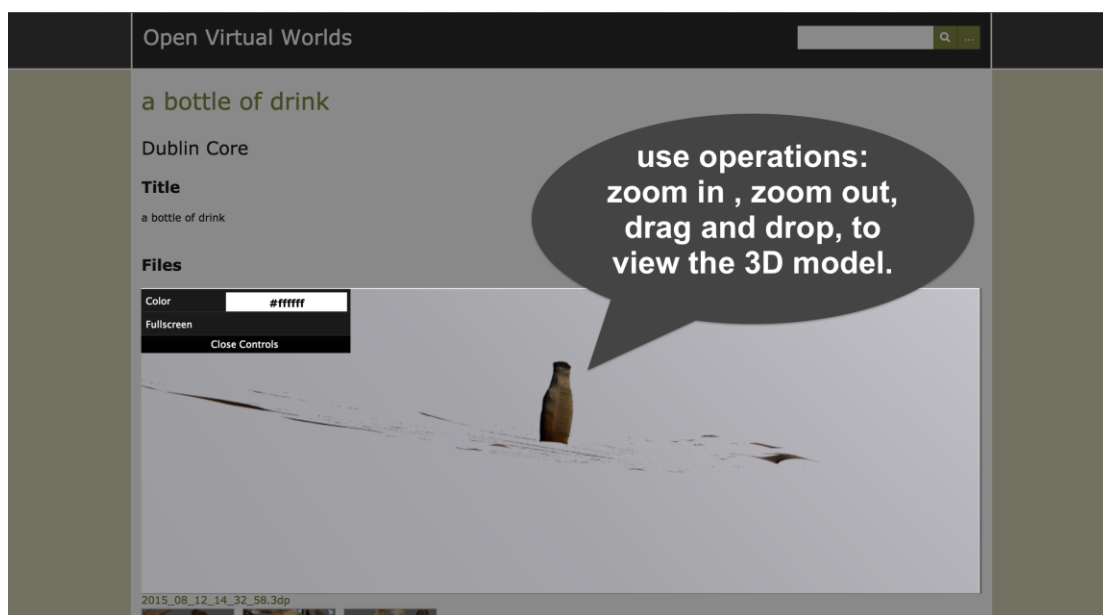
10. Create an Exhibit with 3D models

An account for Omeka is necessary. In addition, items of 3D models should be created before creating an exhibit.

    a) Open the system created on Omeka platform, such as Open Virtual Worlds.

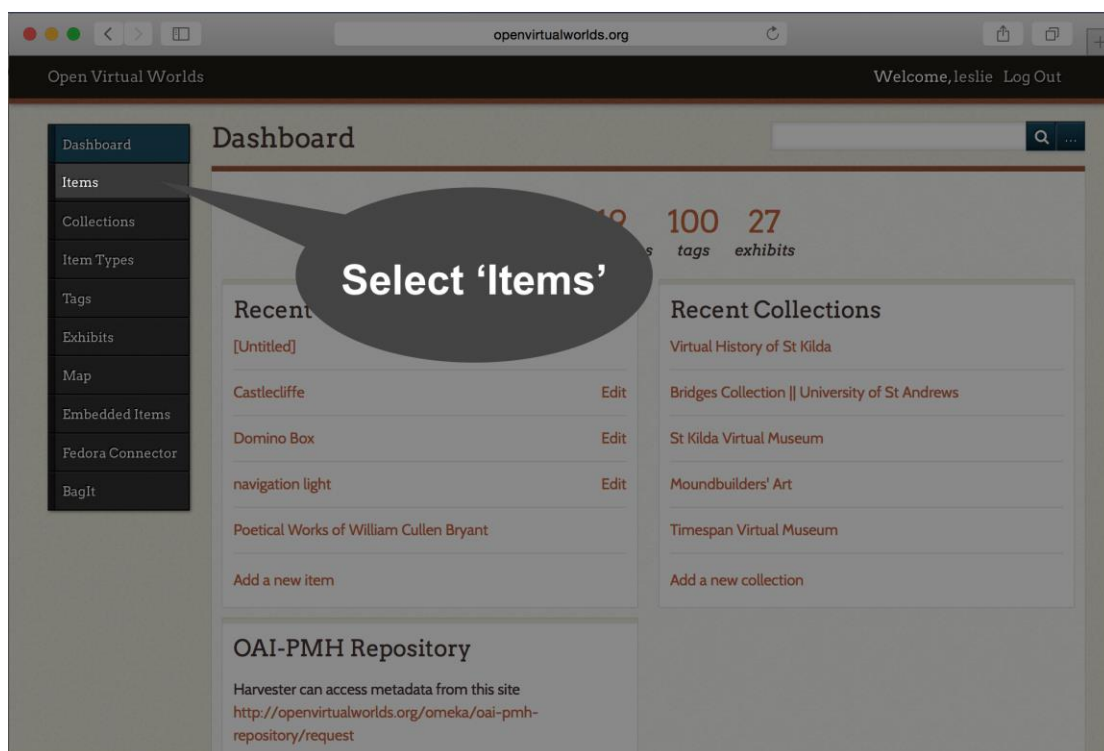   Log in with username and password. The following is the link to log in

http://openvirtualworlds.org/omeka/admin/users/login
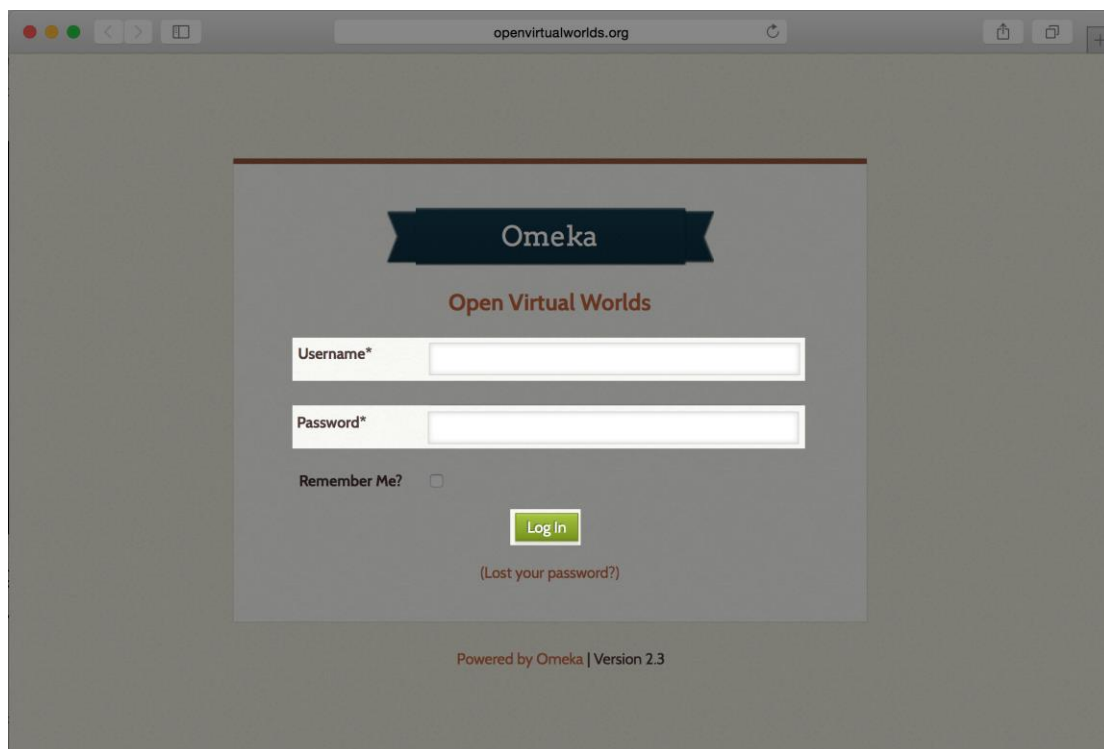
b) Select 'Exhibits'
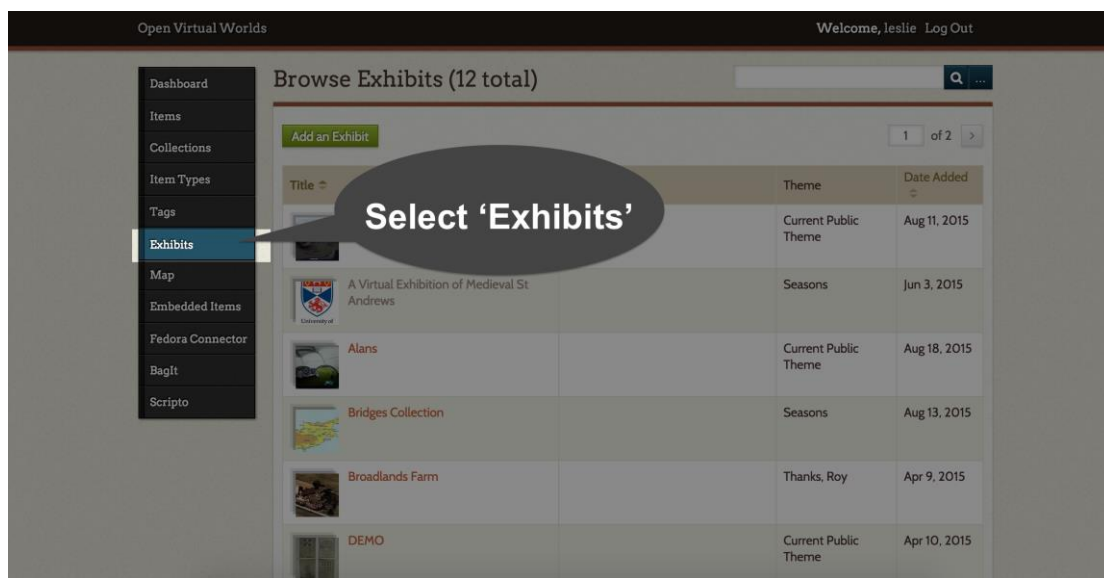
c) Click 'Add an Exhibit'
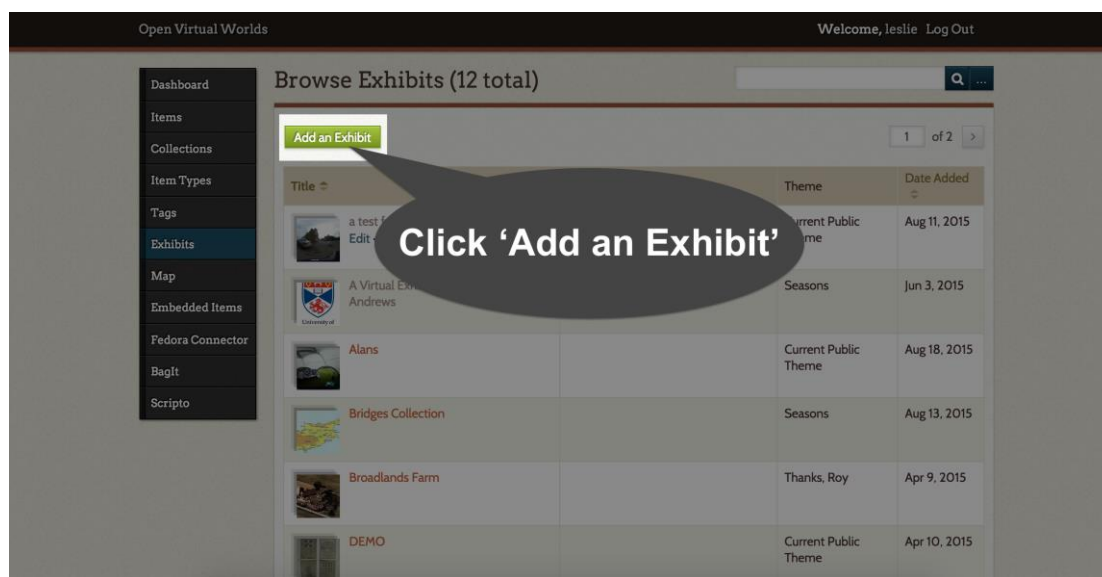
d) Type in the name of the Exhibit
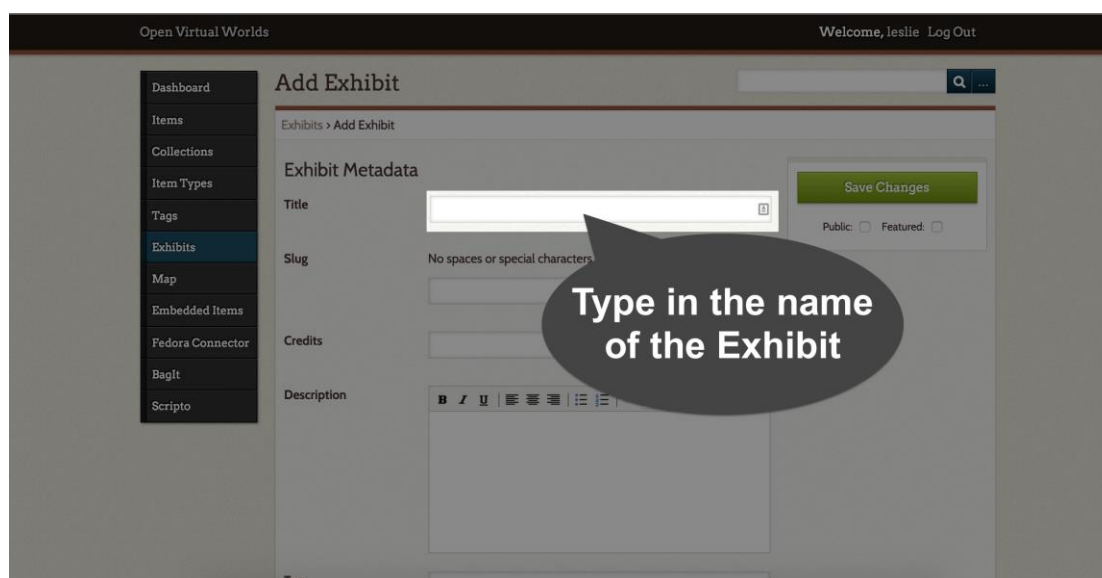
e) At the end of the webpage, click 'Add Page'
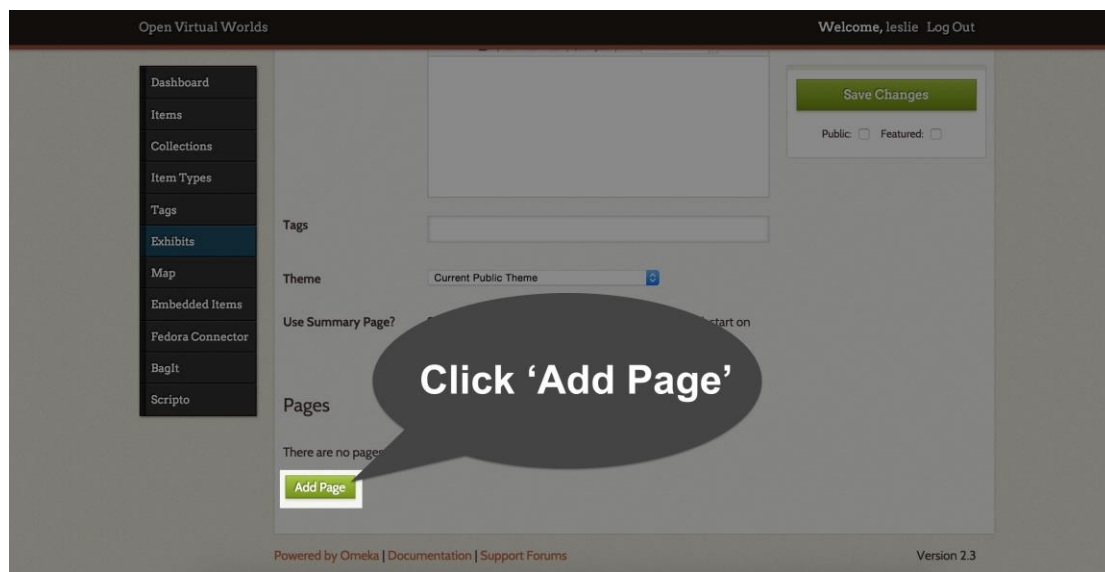
f) Type in the title of the page
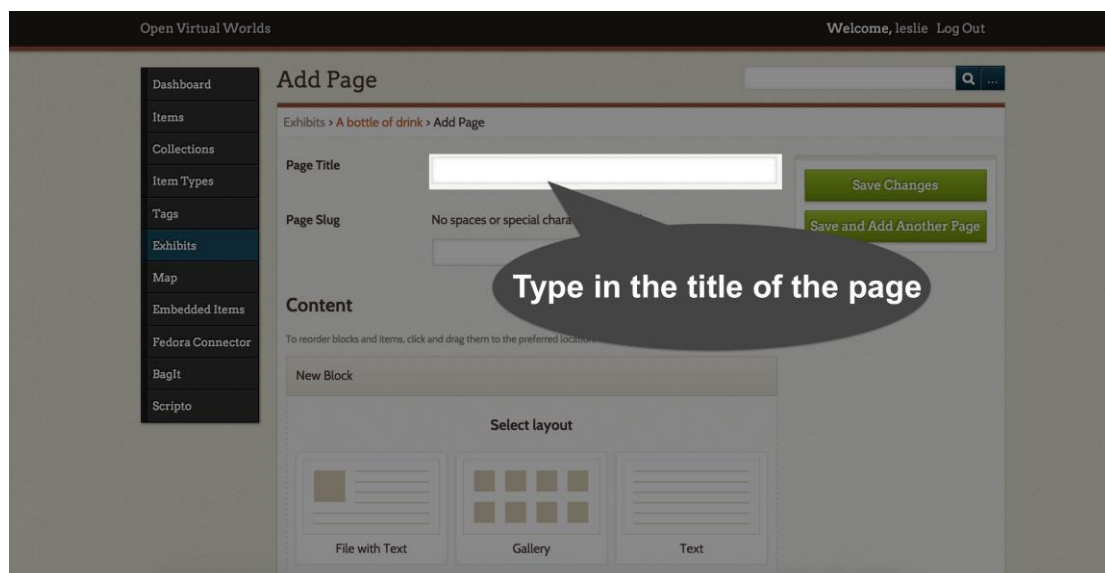
g) At the end of this webpage, select the block named '3D Mesh View' and click the button 'Add new content block'
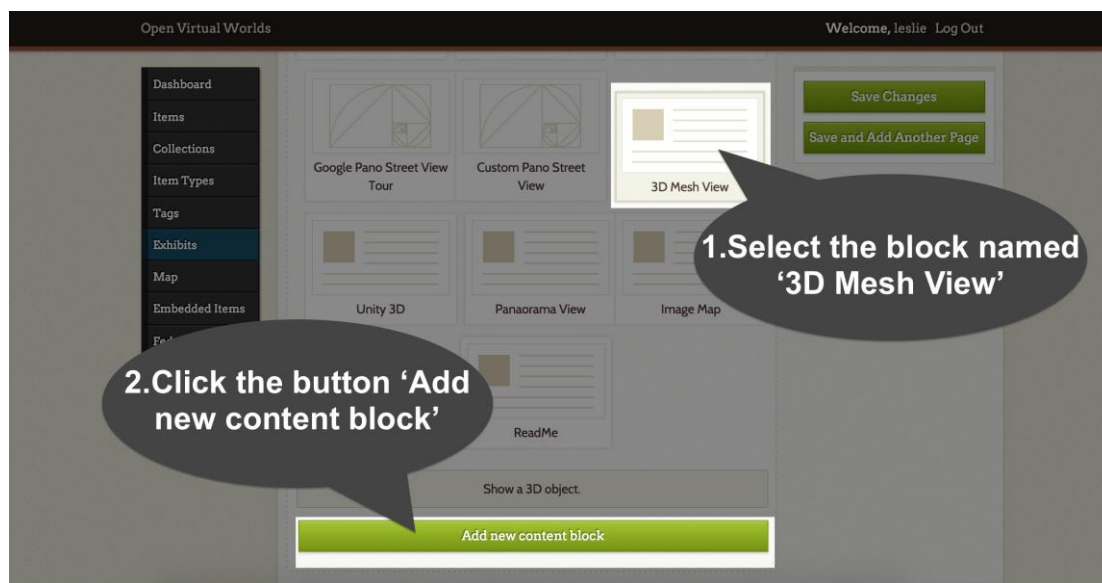
h) Click 'Add Item' in the added block
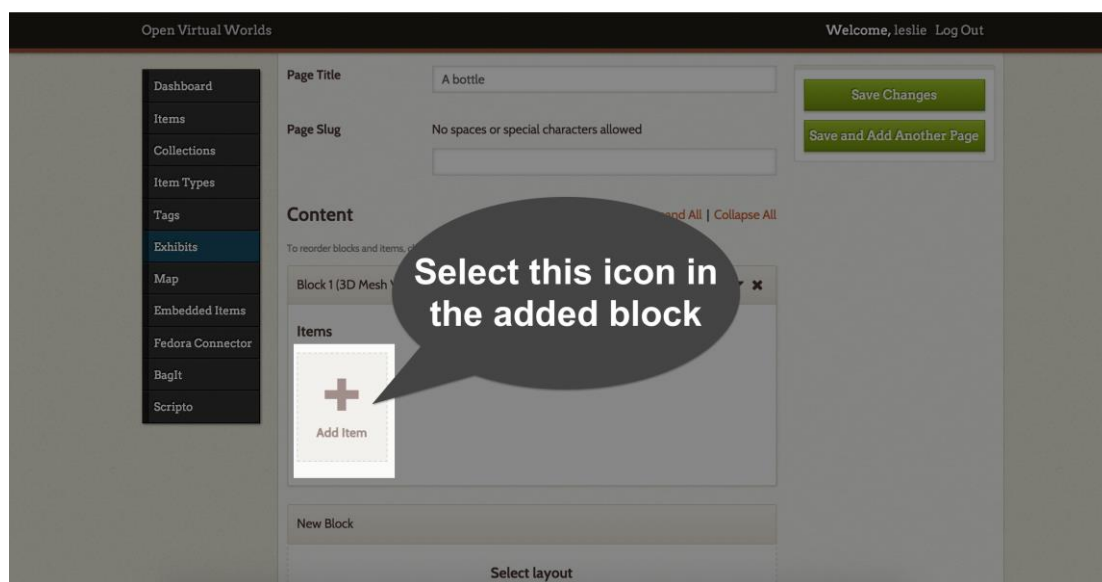
i) Select an item in the pop up window and click the button 'Select Item'
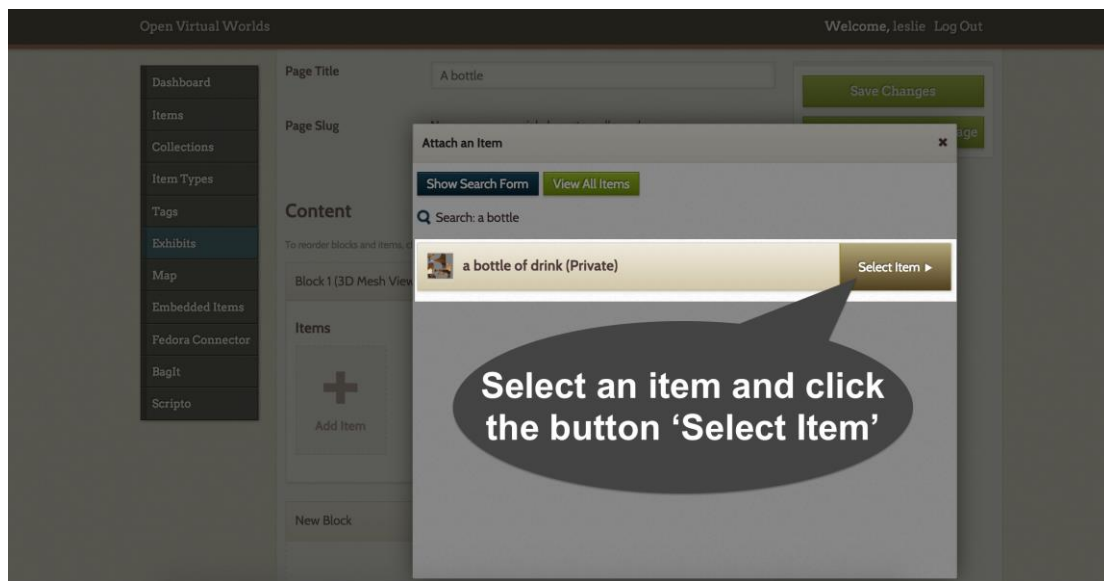
j) Select a file with the type of 'obj' in the pop up window, and then click the button 'Apply'
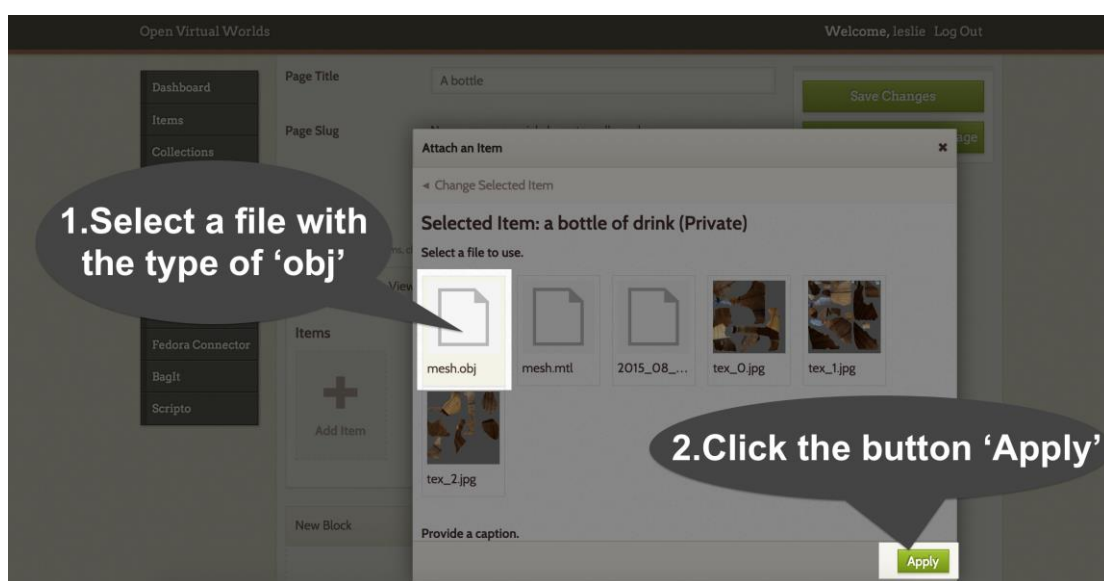
k) Click the button 'Save Changes'
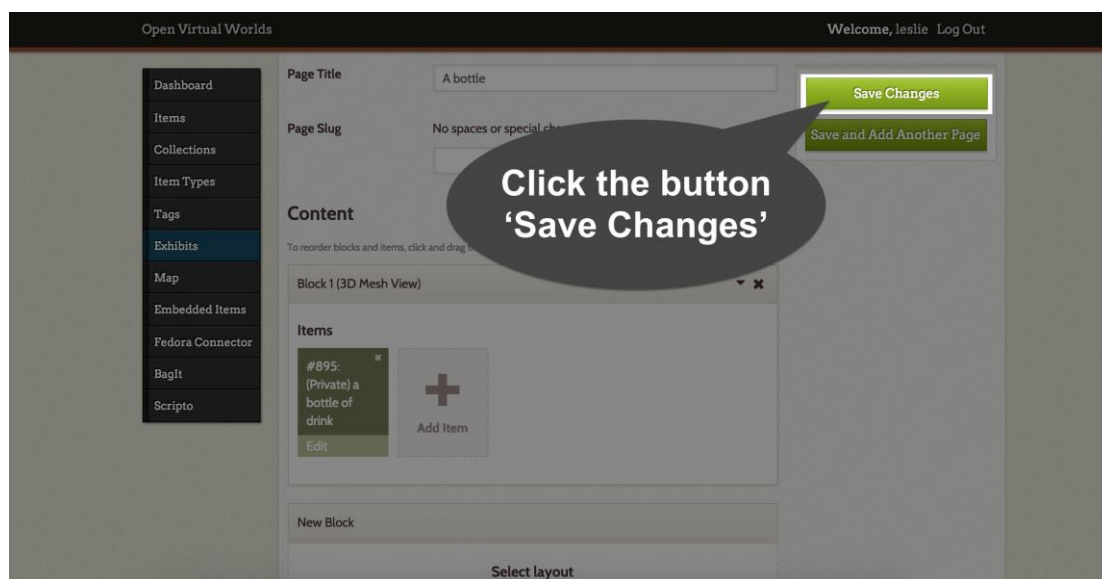
l)   Click the button 'View Public Page' to view the created exhibit
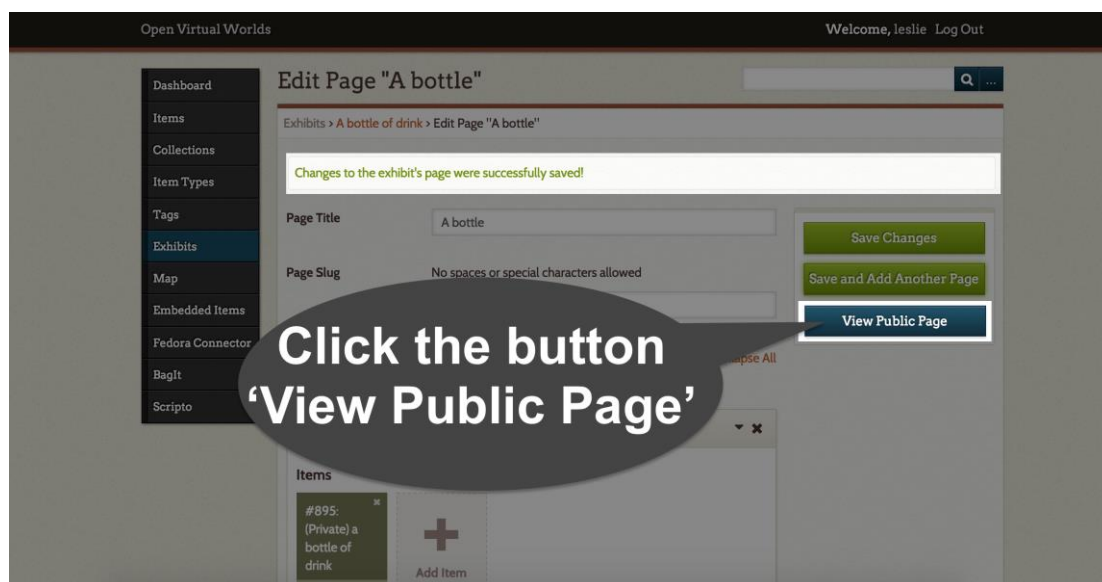
m) View the 3D model by zooming in, zooming out, drag and drop
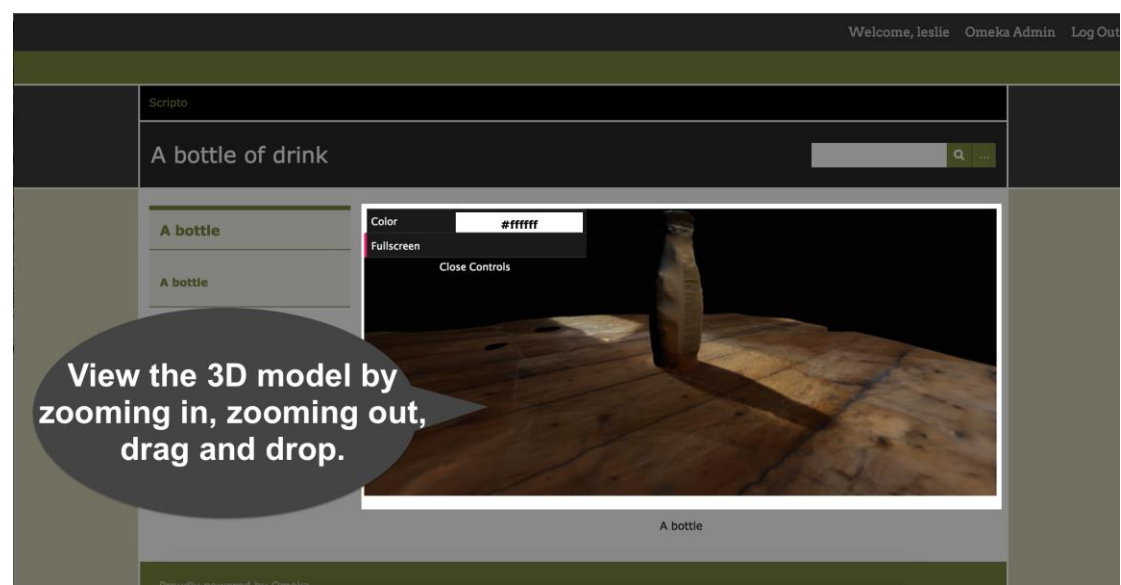
11. Tips

a) Do not move the original object. Move the mobile device around the object to capture images.

b) When creating a 3D model, the original object should be selected carefully. Neither moving objects nor transparent objects are a good choice. Furthermore, objects made by glass, which are glossy and reflective, are not good choice for the original object.

c) The distance between the camera or mobile device and the original object should be noticed. It will produce a 3D model with bad quality, if it is too far or too close from the original object to the device. The whole object should be in the screen when capturing photos.

d) Flashlight should not be used during capturing images. Arguably, sunlight is the best light

e) During the process of creating a 3D model, the mobile app provides two translucent circles in the lower left corner to help users when capturing photos. These two translucent circles change the shape according to the position of the mobile device. For example, if the mobile device is placed

vertically, these two circles turn into two ellipses. When the mobile device is turning horizontally, the ellipses change into circles again. The function of these two circles is to record the position of captured photos. For example, once the user takes images on the right side of the object, the corresponding part of the translucent circle will be marked with blue. These two translucent circles will rotate when the camera moves around the object. Hence, there is no need to worry about remembering the position of the camera when capturing photos.
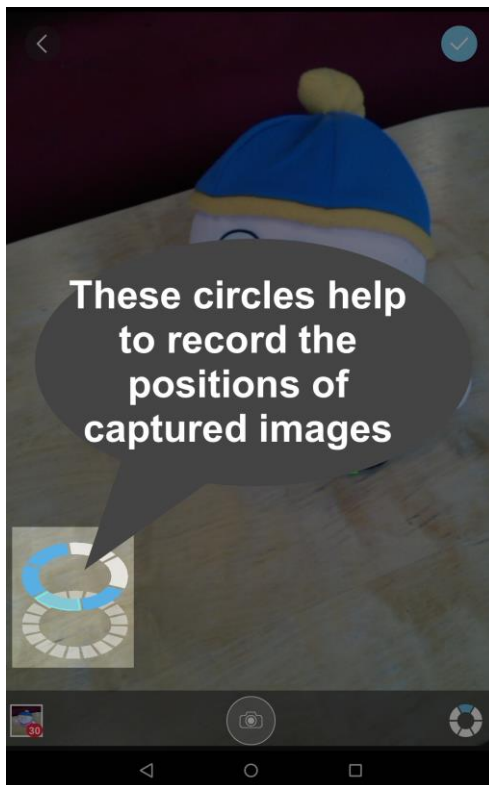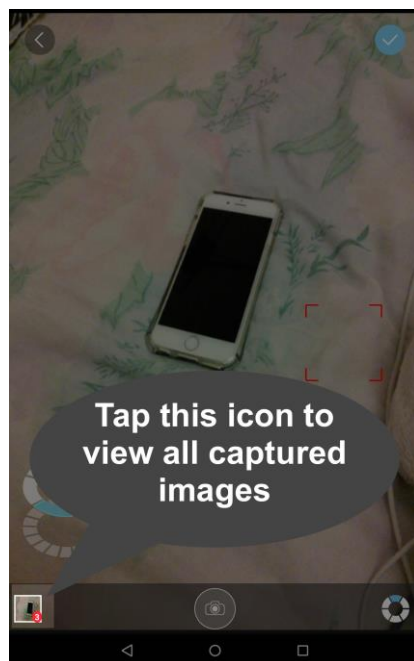

f) The two translucent circles can be removed by tapping the circle at the bottom right corner. In other words, users can tap the circle to use these two translucent circles.
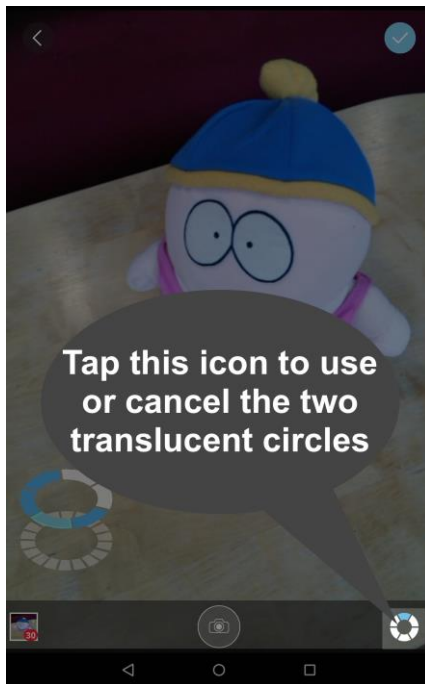
g) During the process of creating 3D models, the user can retake a photo.

   i.   Firstly, tap the image icon in the bottom left corner of the capturing screen.
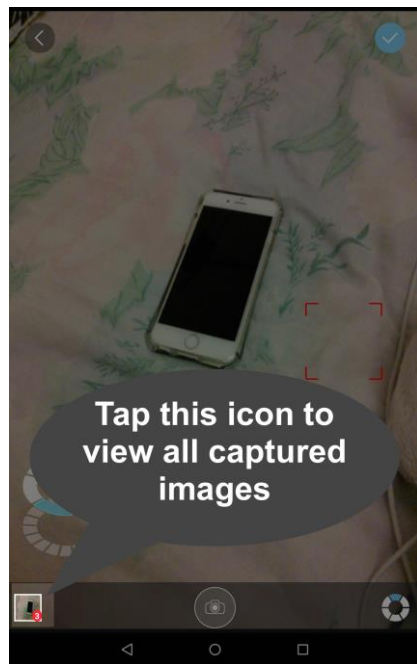

   ii.   Secondly, select one image to edit.
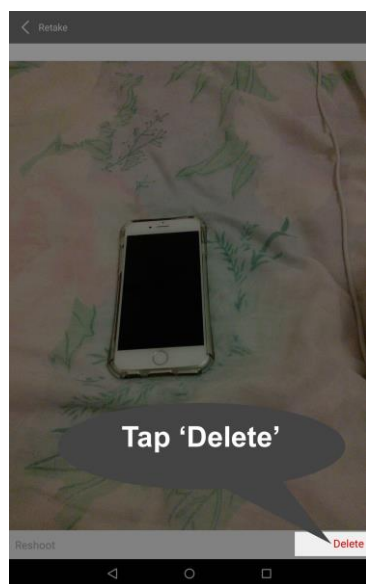
     iii.   Thirdly, select 'Reshoot'

h) During the process of creating 3D models, the user can delete the captured image

   i.   Firstly, tap the image icon in the bottom left corner of the capturing screen.

ii.　　Secondly, select one image to edit.

iii.　　Thirdly, select 'Delete'

i) When uploading 3D models to Omeka platform, the document with the suffix of 'obj' should be added at first, then add other documents.

j) When uploading 3D models to Omeka platform, all the documents in the directory of 'mesh' should be added

k) When uploading 3D models to Omeka platform, do not reload the webpage or close the webpage after click the button 'Add Item'. It takes some time to upload files. There is a hint in the bottom left corner, if the mouse cursor is on the webpage.
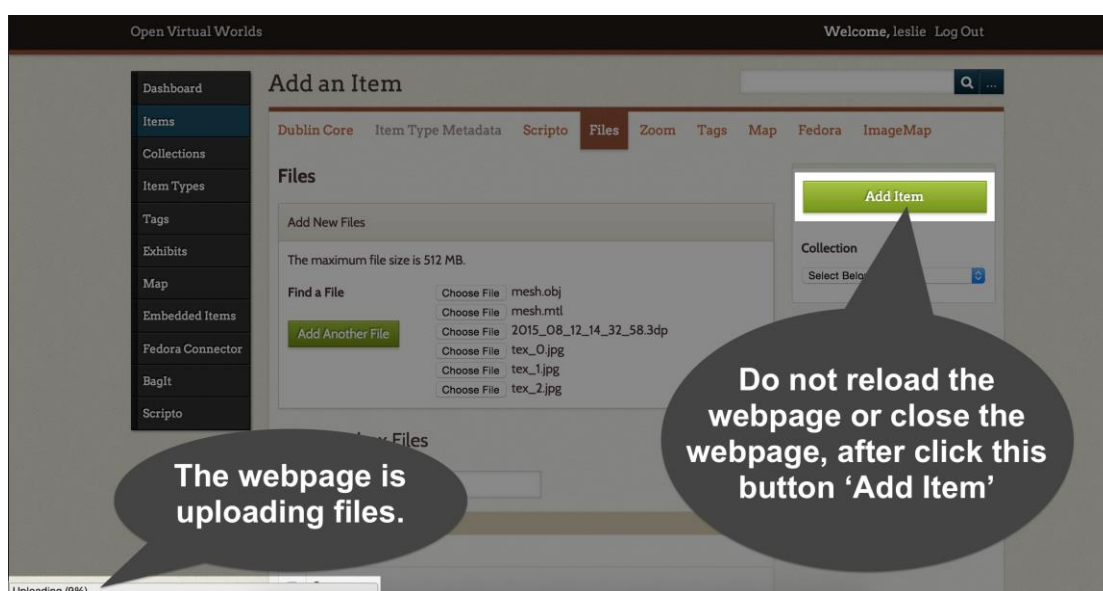

l) When viewing 3D models on Omeka platform, it might take a long time to load. Please be patient.

m) When viewing 3D models on Omeka platform, the initial scale and angle between the 3D model and the platform can be modified, if the visitor is the creator of the 3D model. The following steps show how to modify it.
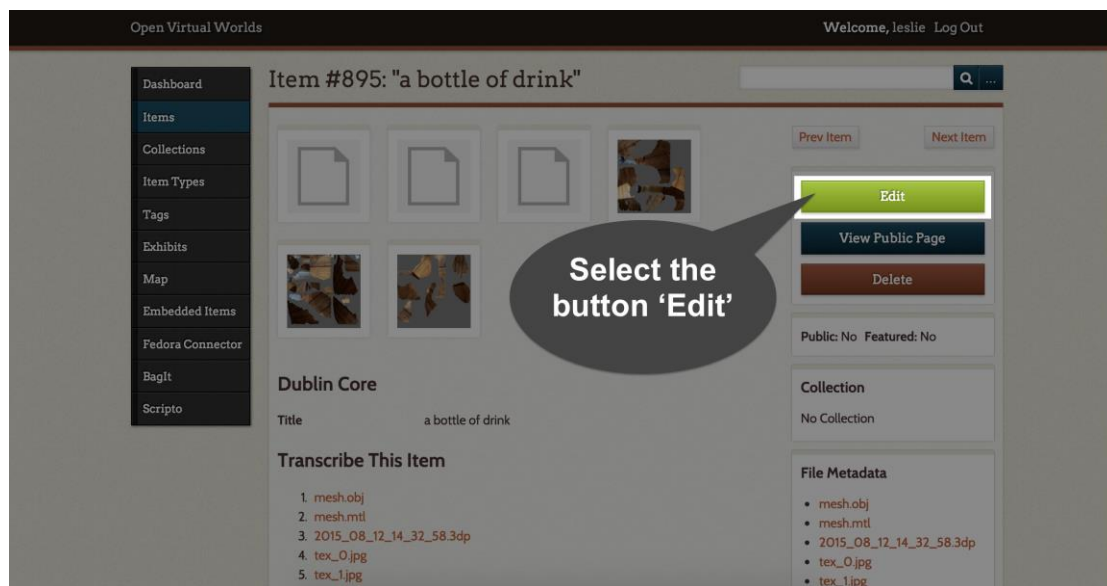
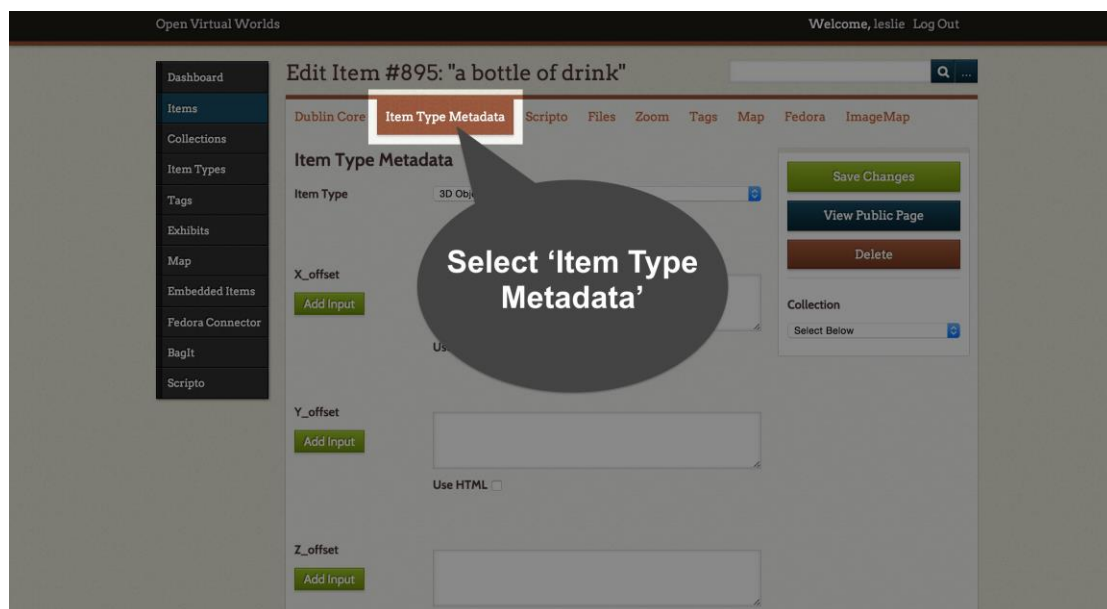   i.   After signing in, select 'Items'
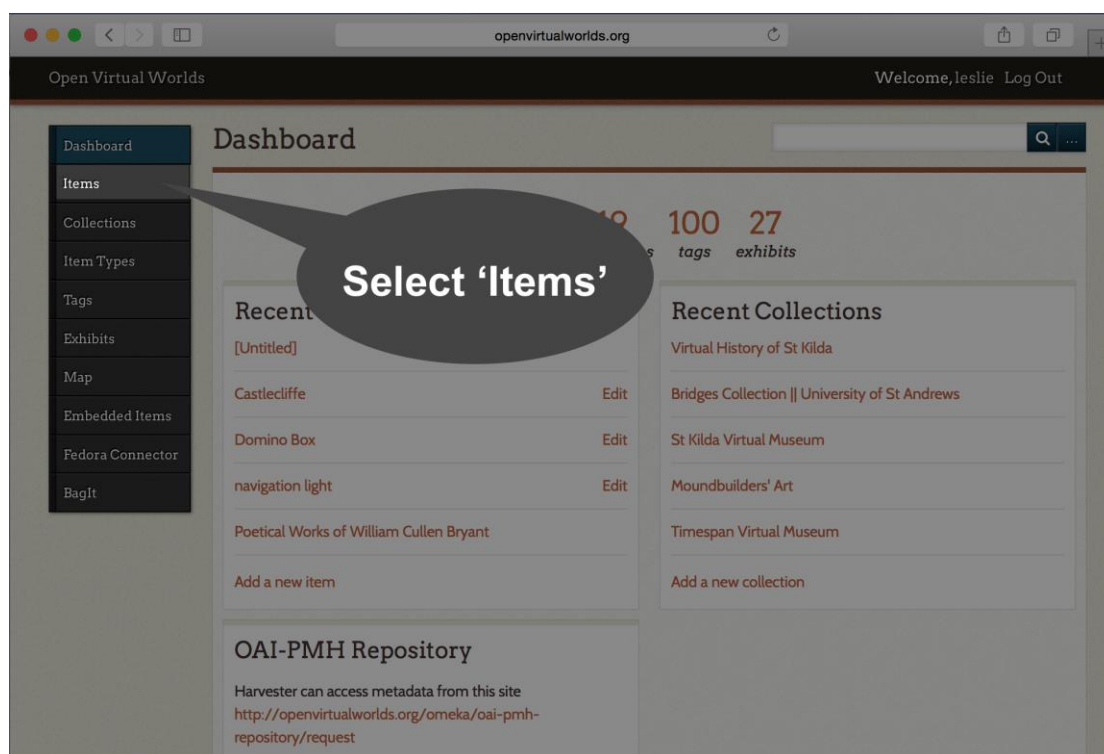
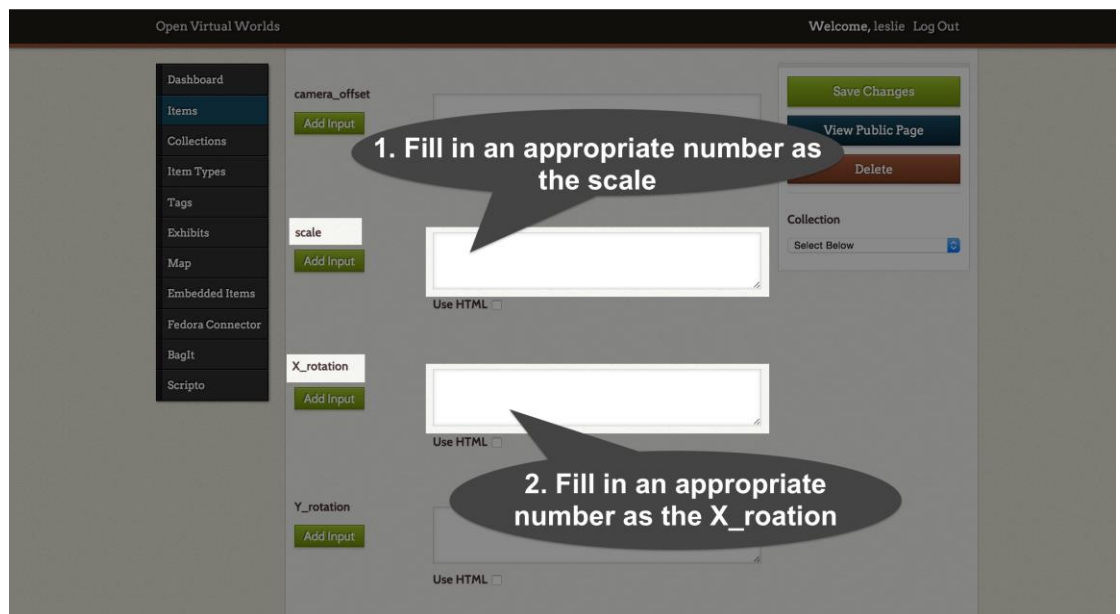   ii.   Select a 3D model with the type of '3D Object'
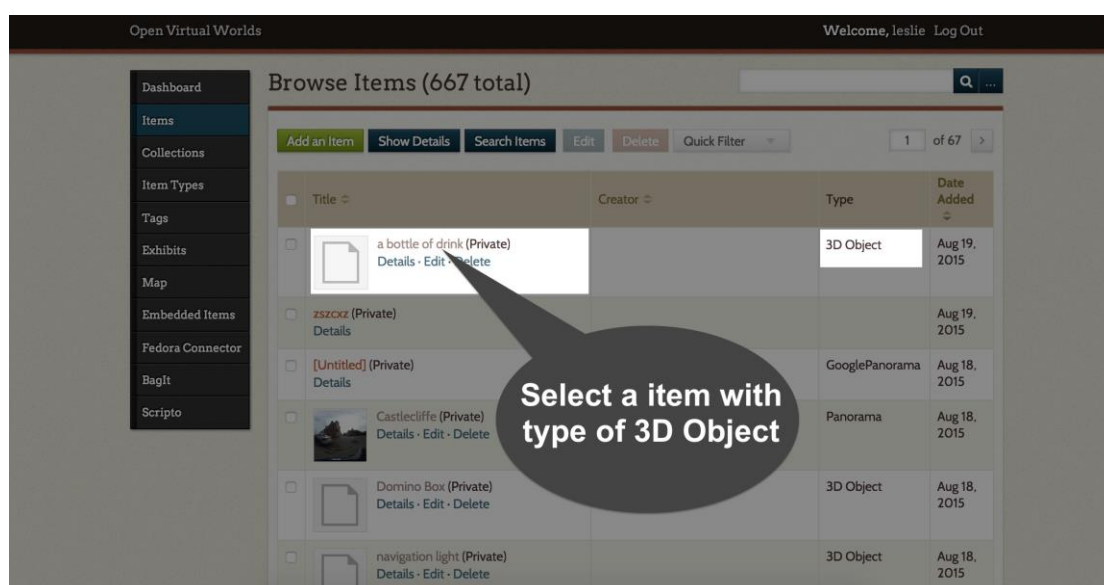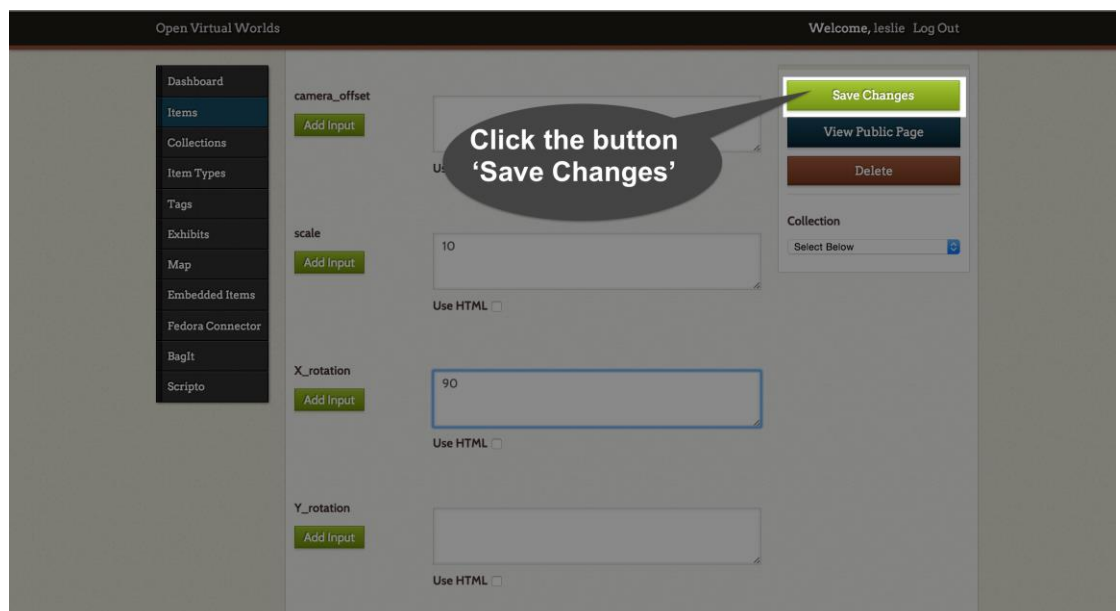

    iii.   Select the button 'Edit'

iv.   Select 'Item Type Metadata'
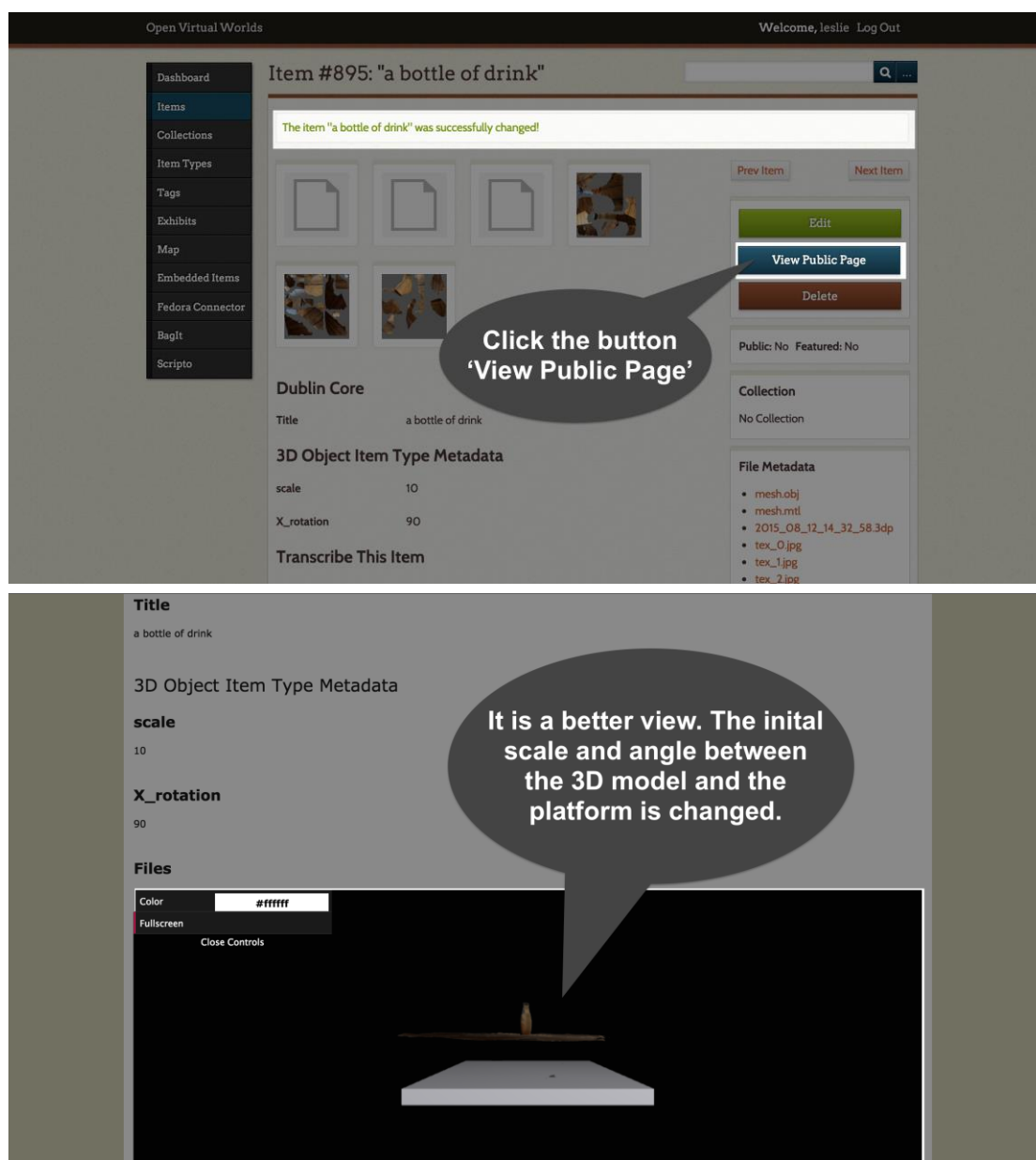

v.   Fill in 'scale' and 'X_rotation'

vi.   Click the button 'Save Changes'

vii.   Click the button 'View Public Page' and a better view of the 3D model is
         presented

12. Reference

[1] Omeka. *Omeka: Serious Web Publishing.* [online] Access at: < http://omeka.org/about/ >