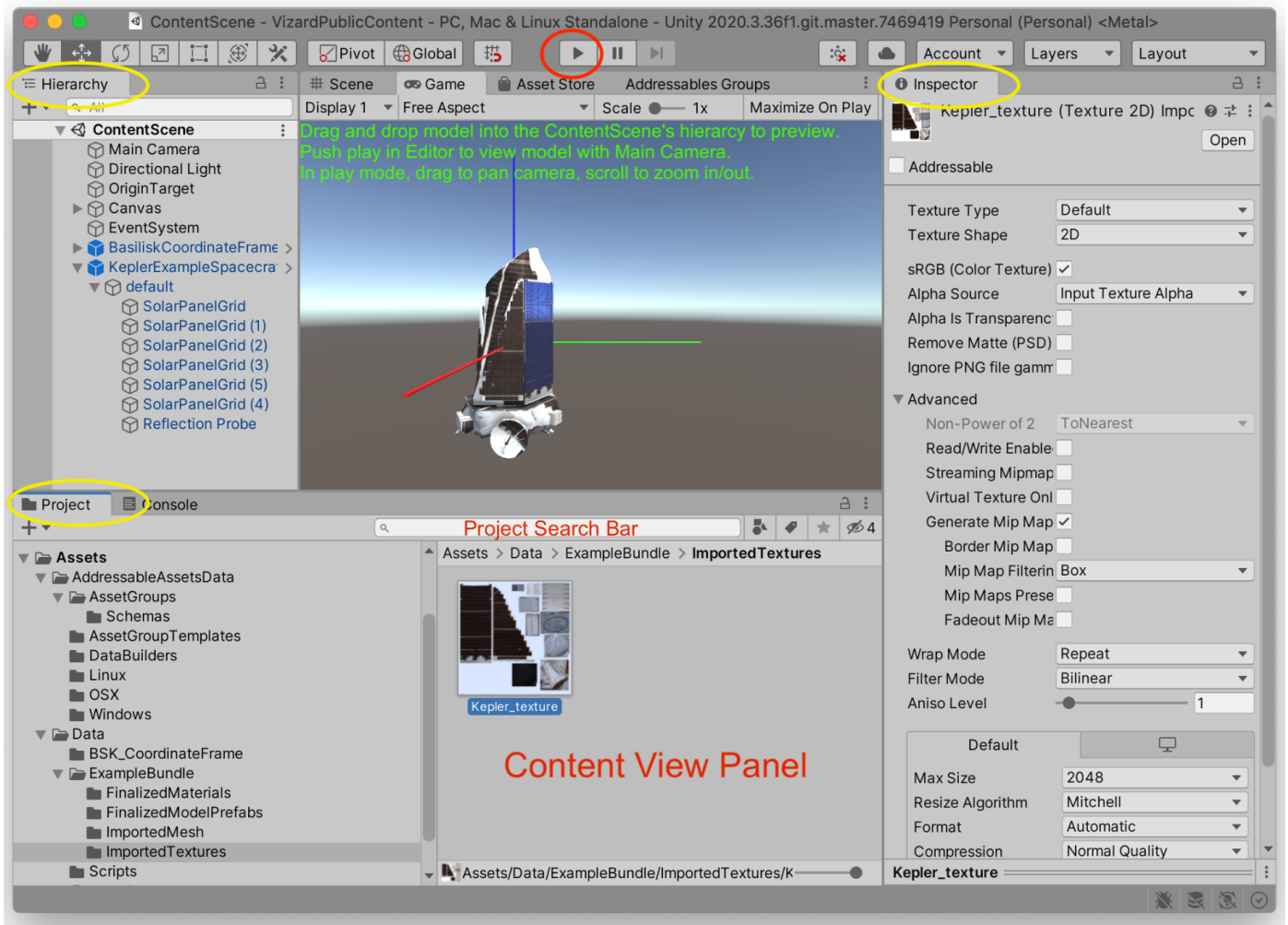


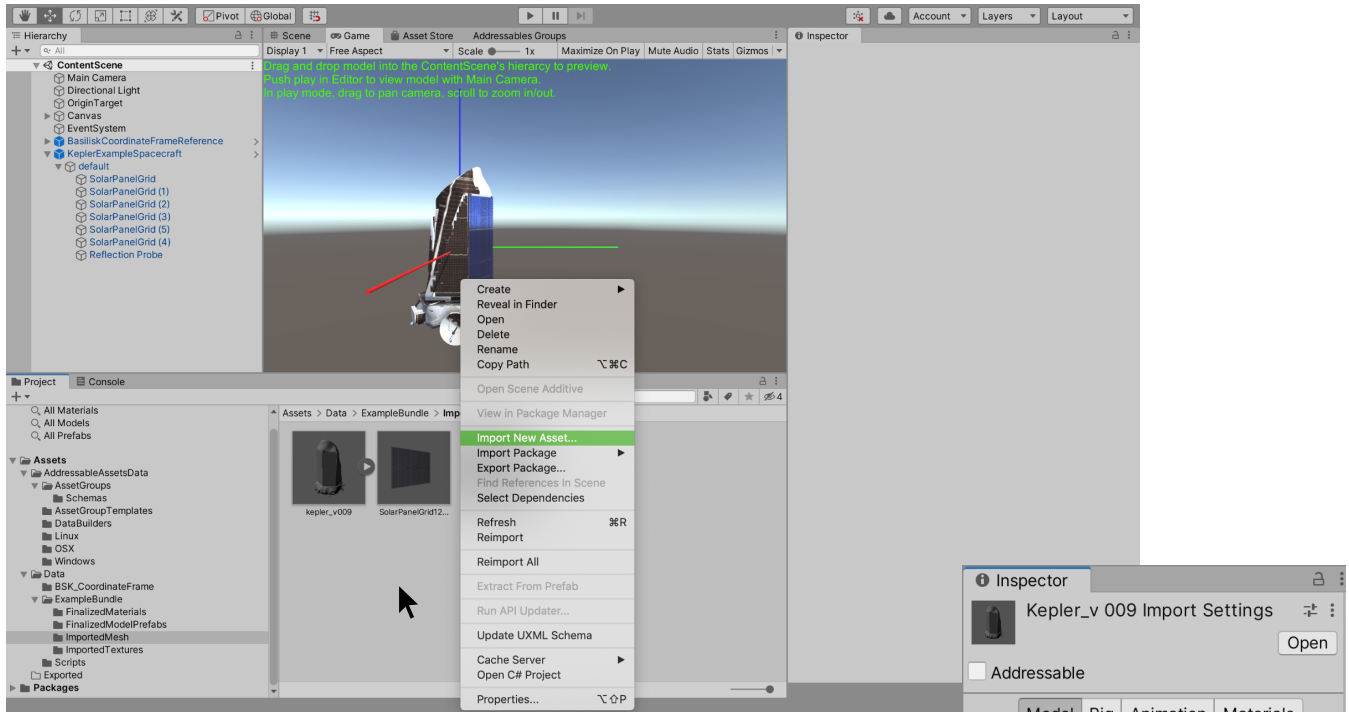


1. Download the VizardPublicContent project to your computer.
2. Start Unity Hub and open the VizardPublicContent project.
3. If you are unfamiliar with the Unity Editor, take a moment to look at the different panels .



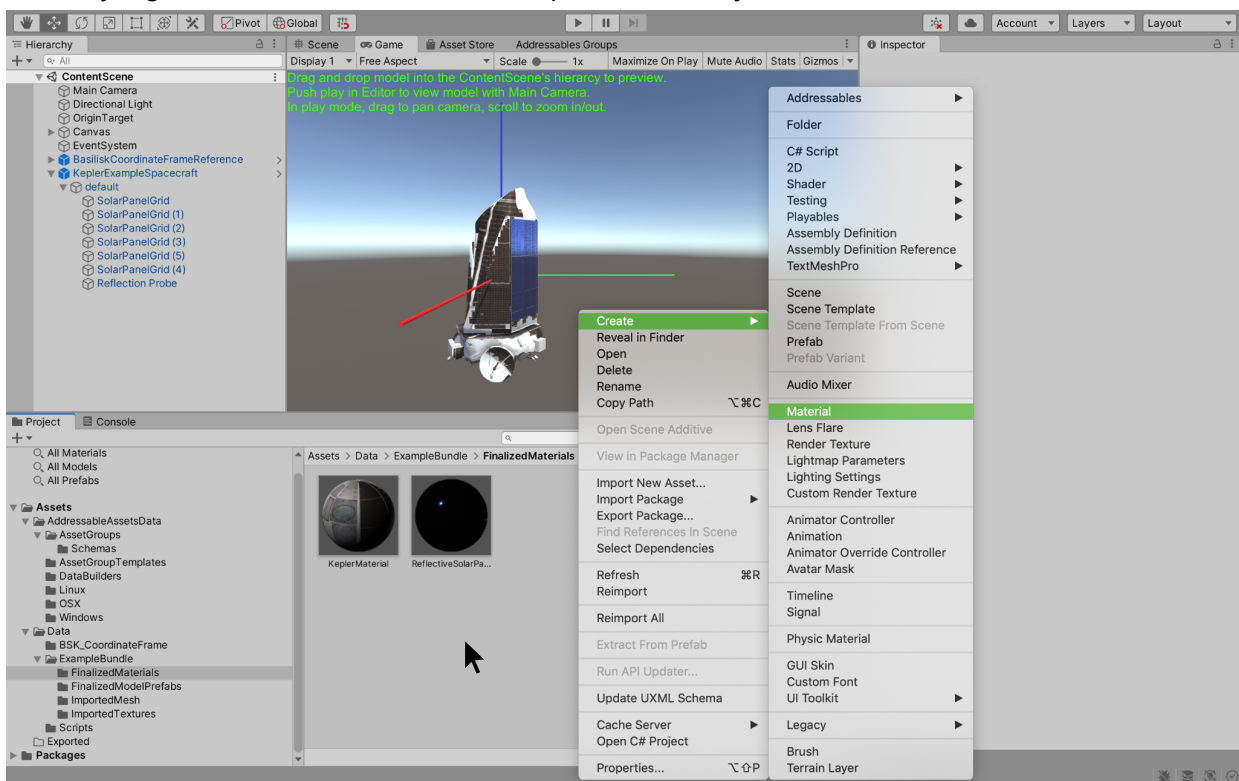
4. Under the Unity Editor **Project** panel note the Data>ExampleBundle directory. Contained within this directory is an example model import and subdirectories that can be used to organize your custom models' data. Under the ExampleBundle directory are four subdirectories:
  - a. Finalized Materials - create and store your model's applied materials here (these will need to be marked Addressable when building your bundle)
  - b. Finalized Model Prefabs - finalized Unity Prefab version(s) of your model(s) with all materials applied (these will need to be marked Addressable when building your bundle)
  - c. Imported Mesh - import your model's mesh into this directory
  - d. Imported Textures - place any image textures, normal maps, etc. that you will use in your model's materials here

5. **IMPORT YOUR MODEL:** Inside the Unity Editor’s **Project** panel, select the Imported Mesh directory, right click in the **Project Content View** part of the Project panel, and select “Import New Asset” from the menu. Navigate with the File Browser to the model you want to import into Unity, select it and click Import.



- a. Select your imported model to see its Import Settings inside the **Inspector** panel.
- b. Under the Model tab of the Import Settings:
  - i. Uncheck the Import Cameras radio box (if present, they are usually Blender artifacts)
  - ii. Uncheck the Import Lights radio box (if present, they are usually Blender artifacts)
  - iii. Check the Generate Colliders radio box (Unity will generate the physics colliders necessary to prevent Vizard’s lights from shining through the mesh)
  - iv. Note the Scale Factor input field and the Convert Units check box, you may need to revisit the scaling here if your model does not import the size you desire (see Step 7e)
  - v. Using the default for the remaining settings is a good place to start
- c. Under the Rig tab of the Import Settings, select “None” front the Animation Type dropdown (again, unless you know otherwise)
- d. Under the Animation tab of the Import Settings, uncheck the “Import Animation” check box.
- e. Click the Apply button at the bottom right of the settings of whatever tab you’re in.

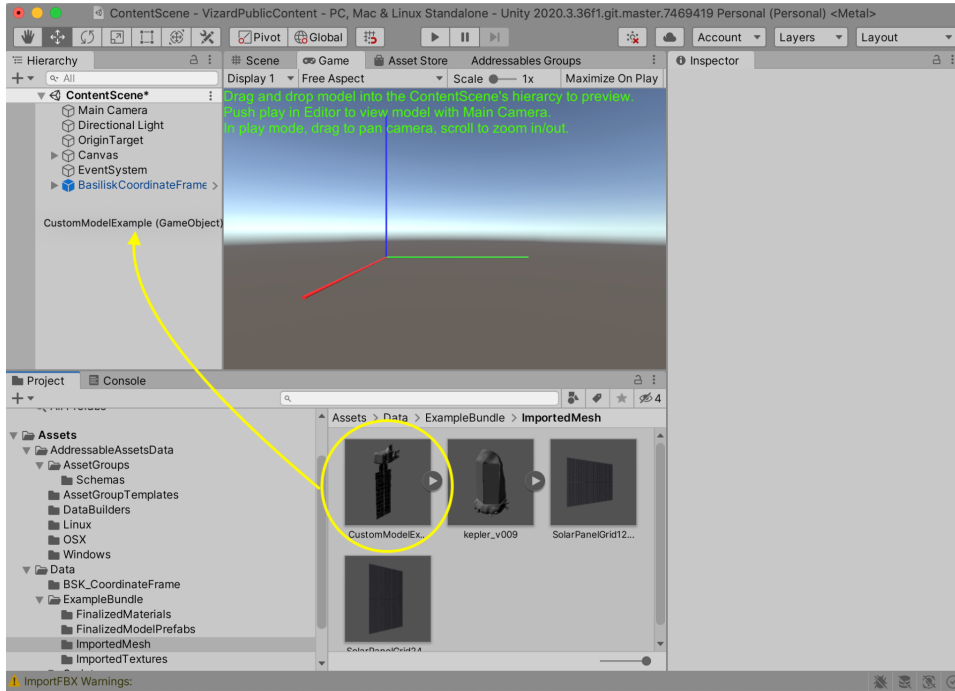
6. [OPTIONAL] IMPORT TEXTURES: Inside the Unity Editor's **Project** tab, select the Imported Textures directory, right click in the contents viewer part of the Project tab, and select "Import New Asset" from the menu. Navigate to any image textures, normal maps, etc. that you want to include with your model's materials, select them and import.
  - a. Normal maps must be marked "Normal map" instead of "Default" in the **Inspector** under the TextureType drop down menu. You must click apply to make this change.
  - b. Some imported models will automatically create internal materials. If your model looks correctly colored and textured after importing, you can skip importing textures and building materials.
7. [OPTIONAL] CREATE MATERIALS: Inside the Unity Editor's **Project** tab, select the Imported Textures directory, right click in the contents viewer part of the Project tab, and select Create>Material.



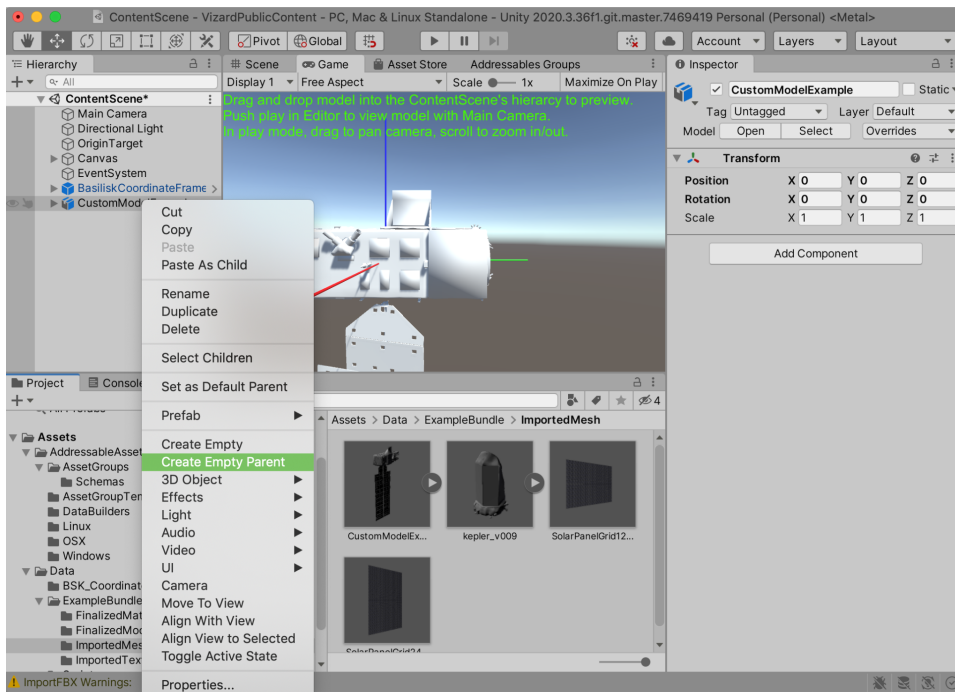
- a. Click on the newly created material and name it in the **Inspector**
- b. If you only want to apply a color and/or change the other available shader settings, or even the shader being used you can do that in the Inspector. Changing the color of the color sample next to the Albedo item in the Standard shader will change the color of any meshes using this material.
- c. If you have an image texture to apply: Click the target next to "Albedo" in the Material Inspector and in the pop-up "Select Texture" window, choose the image texture you want to apply to the material.
- d. If you have a normal map to apply: Click the target next to "Normal Map" in the Material Inspector and in the pop-up "Select Texture" window, choose the normal map you want to apply to the material.
- e. Repeat to create as many different materials as you need to finalize your model's appearance.

### 8. BUILD MODEL PREFAB

- a. Click and drag your imported model from the **Project** panel's Content View into the **Hierarchy** of the ContentScene to create an instance of your model.

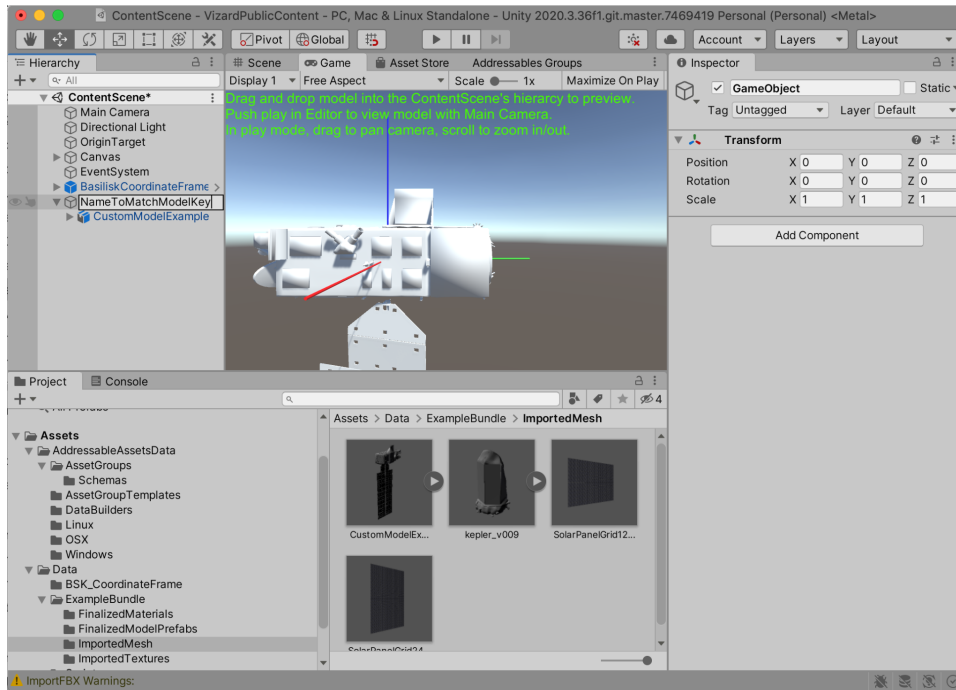


- b. Right click on the instance of your model in the hierarchy and select "Create Empty Parent". Note that your model's instance is now a child of the new GameObject.

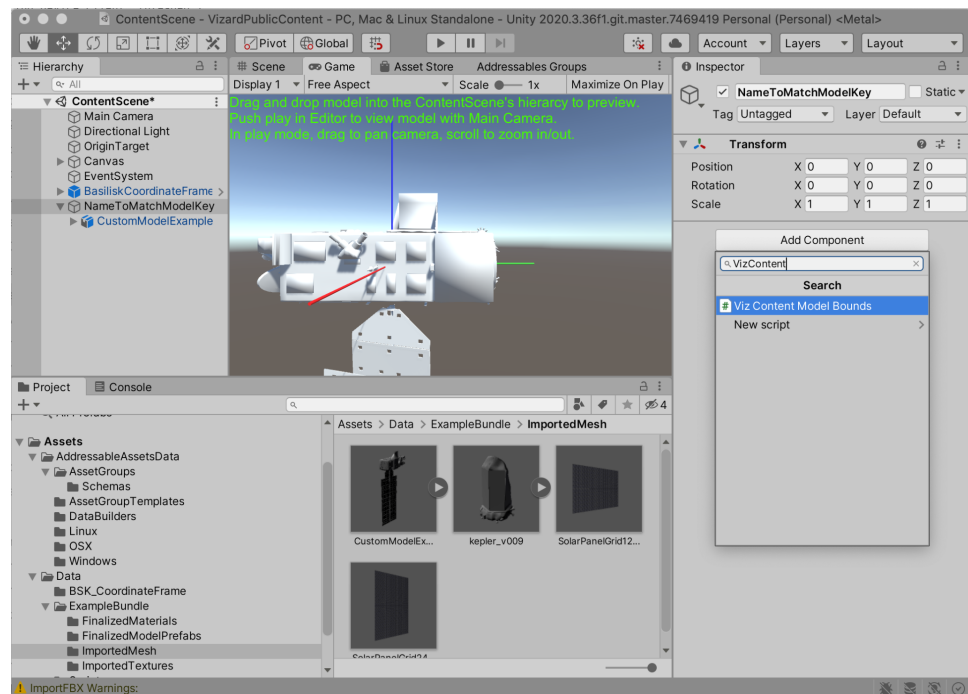




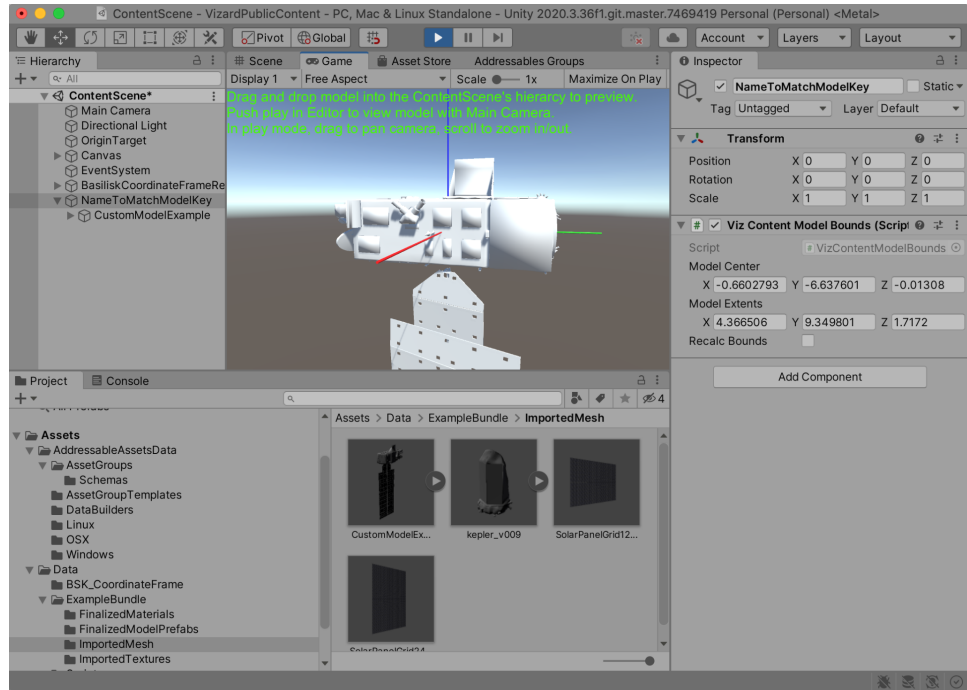
- c. Rename the parent GameObject to the modelDictionaryKey you will use in Basilisk when applying this model at runtime.



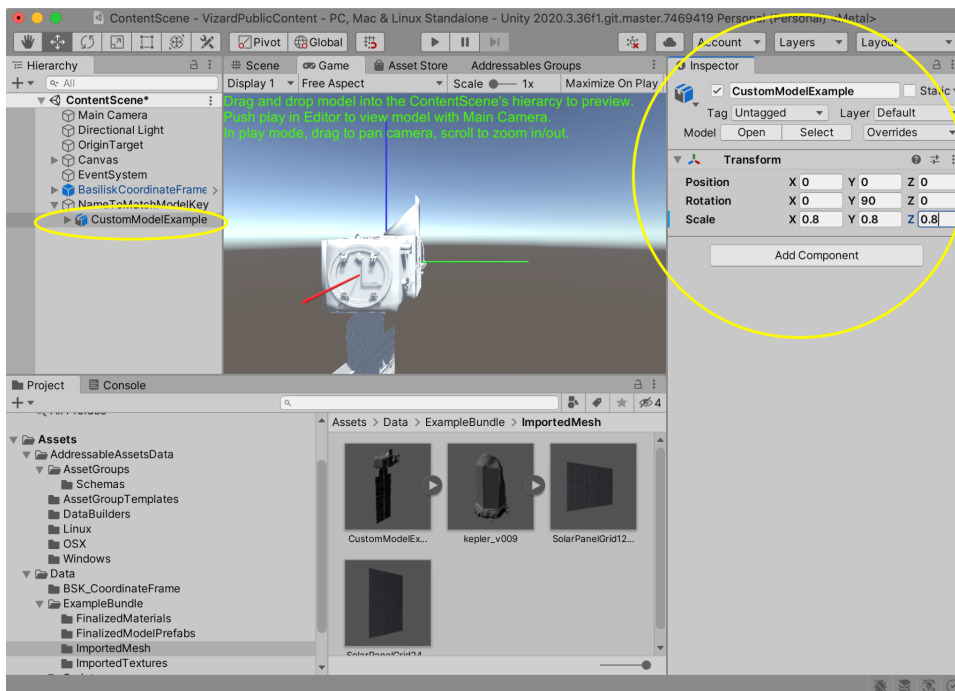
- d. To check the extents and center of your model:
- Add "VizContentModelBounds" script to the parent GameObject. To do this:
    - Select your model instance from the ContentScene hierarchy.
    - At the bottom of the Inspector, click the Add Component button.
    - Type "VizContentModelBounds" into the search box and press enter to add script



- 4. Press Play. The VizContentModelBounds script will automatically calculate the center and extents of your model in Unity Units and show them in the Inspector so you can confirm they are as expected. (Note: Vizard assumes imported models will be in meters if they are spacecraft and in kilometers if they are celestial bodies).

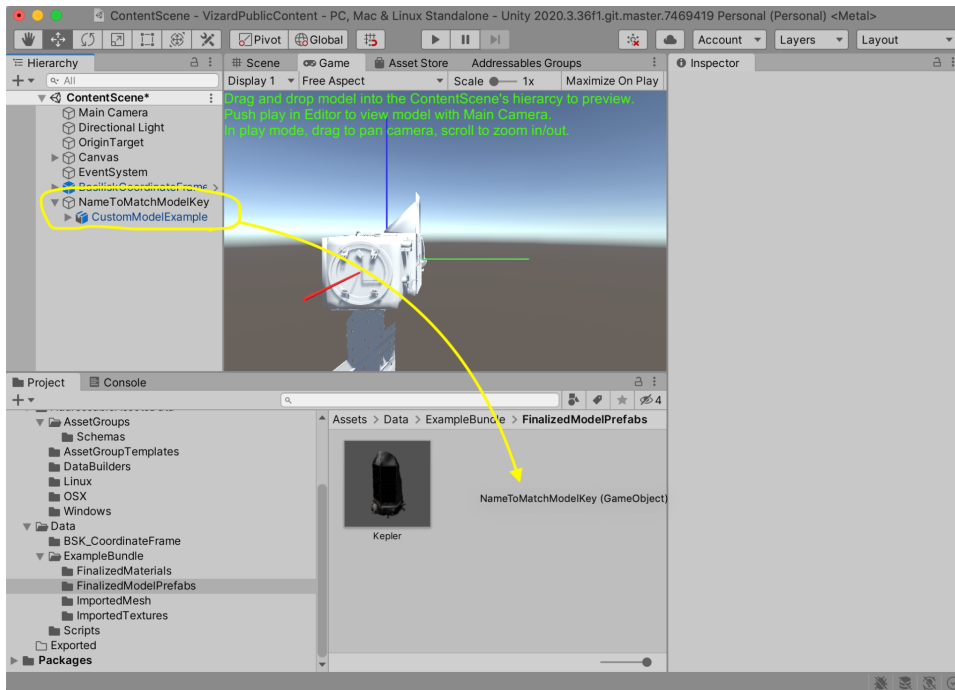


- e. To adjust the position, orientation and scaling of your model and have the changes correctly applied when imported in Vizard you can make changes to the model instance's Transform (not the parent GameObject's Transform). Changes applied while in Play-mode will not stick.



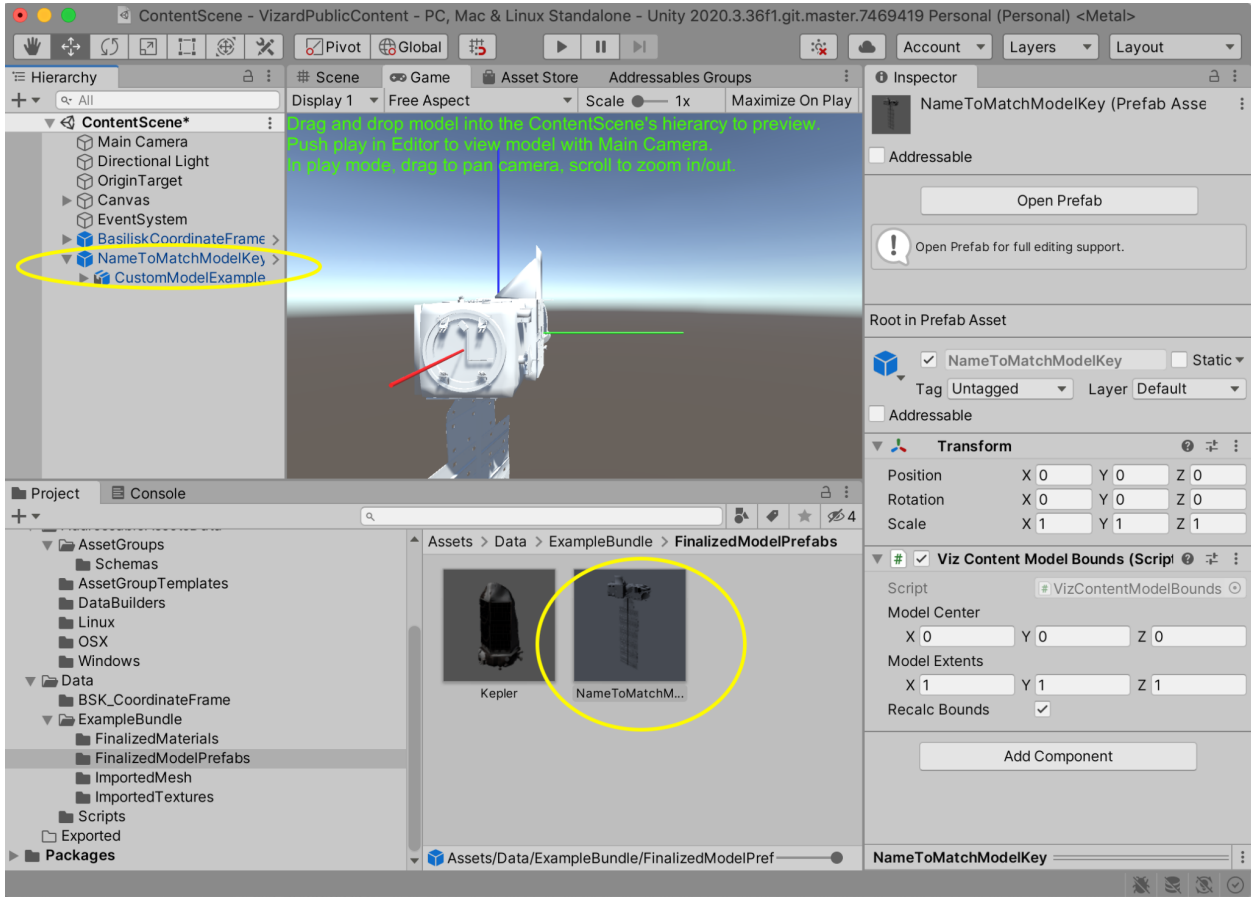


- i. **Scaling:**  
There are two different ways to change the scale of your model:
  - a. Changing the scale in your model's import settings and clicking Apply to reimport the model -or-
  - b. Changing the scale in the Transform component of your model instance in the Inspector
- ii. **Orientation:**  
If the orientation of your model is not correct, after stopping Play you can adjust the Euler rotation of your model in the Transform component.
- iii. **Position:**  
If the origin of your model is not in the desired location, the position of the model can be adjusted in the Transform component.
- f. When you are done adjusting the model, you can remove the VizContentModelBounds script.
- g. Apply the desired Material(s) to each mesh in your model as required. Each mesh has a MeshRenderer component with a Materials field. Click the target to the right of the field to select a material from the pop-up window.
- h. Drag the finalized instance of your model from the hierarchy of the ContentScene to the FinalizedModelPrefabs folder in the Project tab. You will be asked if you want to make an Original Prefab or a variant. Select Original Prefab and confirm to create your Model Prefab.





- i. Confirm that a prefab version of your finalized model exists in the FinalizedModelPrefabs directory. If the prefab was successfully created, the text color of the model's instance in the Content Scene hierarchy should change from black to blue. You can delete the entire prefab's instance in the Content Scene hierarchy to clean up the workspace if desired. Do not delete the prefab in the Project files unless you want to start over.



- 9. Repeat Steps 5 through 8 for any additional models you want to include in your bundle.
- 10. Export your Finalized Model Prefabs and Finalized Materials as an Addressable Bundle (see Custom Vizard Content Addressable Bundle instructions).