

Learning Guide

Artist Designed Models in Unreal Editor for Fortnite

Introduction

You can build unique 3D experiences with many different kinds of assets, including those you design yourself from scratch. This Guide will show you the basics of designing your own 3D models directly within Unreal Editor for Fortnite (UEFN) to enhance your Fortnite island. We will use the example of a snowman. Apply the information you learn and keep experimenting with the functions within UEFN to design original models to your own specifications.

Video Learning Guide for this Lesson:

<https://www.youtube.com/watch?v=MyHYfDvrWXw>

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Prior Knowledge Check

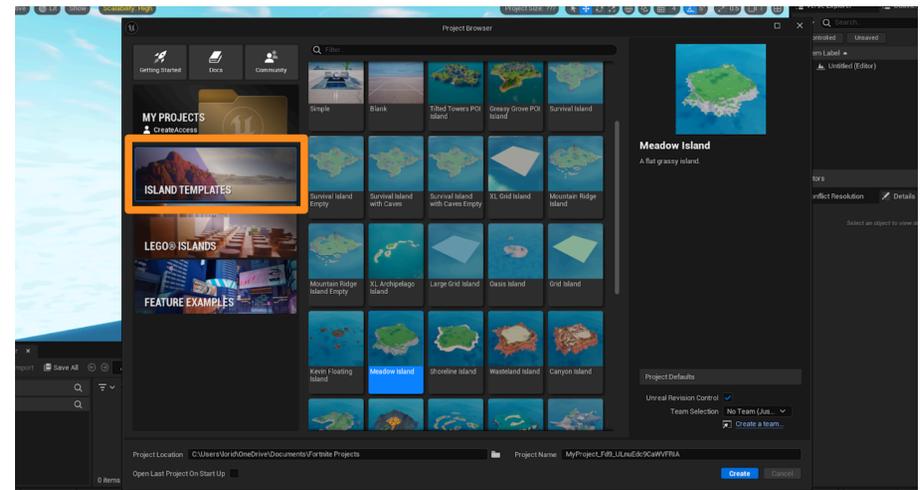
To successfully complete this lesson, you should be familiar with the basics of the UEFN User Interface and be comfortable navigating in UEFN. Take a look at the [Unreal Editor for Fortnite User Interface Basics](#) to familiarize yourself with the interface.

You can also use the [Epic Games Documentation](#) for more detailed information on the UEFN User Interface.

Getting Started

Launch UEFN from the Epic Games Launcher and create a new project or access an existing project.

If you are creating a new project, you can start with a blank island or choose any of the provided templates. Navigate to a location on your island where you would like to begin building.



Step 1: Build a 3D model with shapes and materials

Preview

One way to start building your own models is to start with the basic shapes that will be combined to create your model. This step will introduce you to some of the modeling tools available in UEFN and ways to edit and manipulate basic shapes to achieve the look you want.

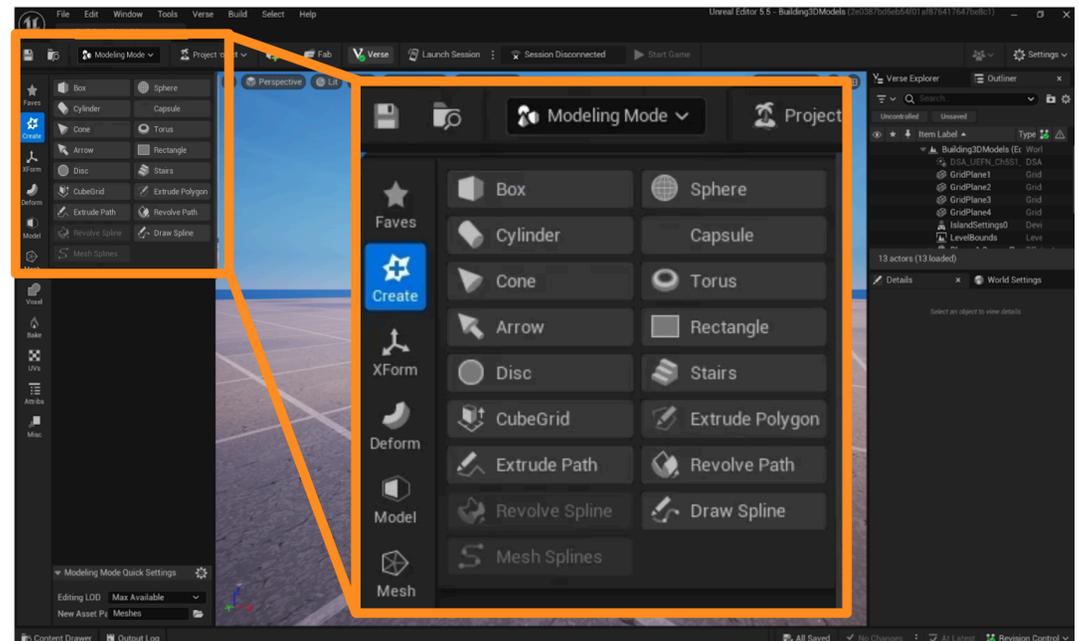
Experiment

ADD SHAPES WITH MATERIAL

From the “**Selection Mode**” dropdown, select “**Modeling Mode.**”

Under the **Create** option on the left-vertical bar, choose a base shape to begin making your model. There are many to choose from.

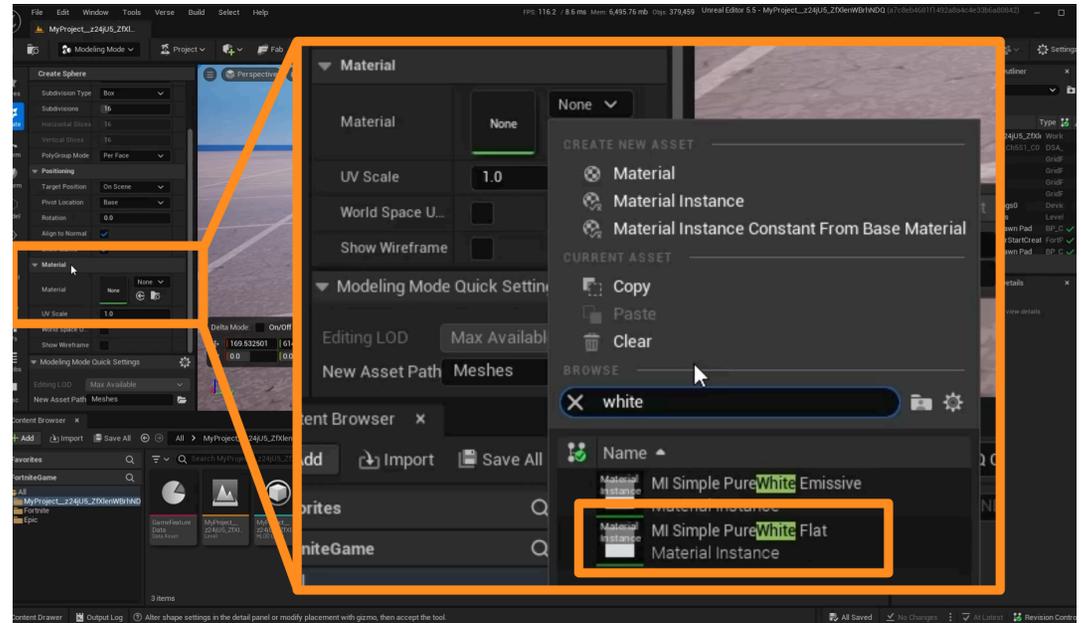
For our snowman, we’ll begin with a Sphere. Click on a shape to select it and place the shape into your scene by clicking where you want to place it in your Viewport.



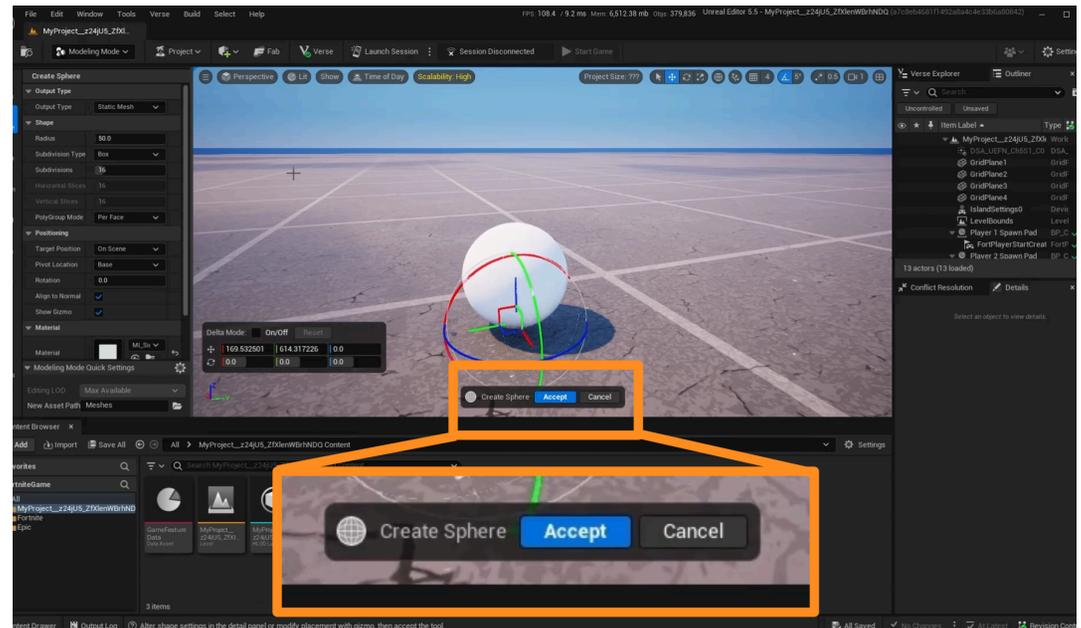
The shape you chose will be added to the scene, and a variety of options appear. One of these is **“Material,”** which defines your shape’s color/texture and how it reacts to light and reflections.

Experiment with different materials until you find one you like. You can use the search bar to search for pre-existing materials.

In our example, we’d like our snowman to be white, so we’ll search for a **“white”** material.



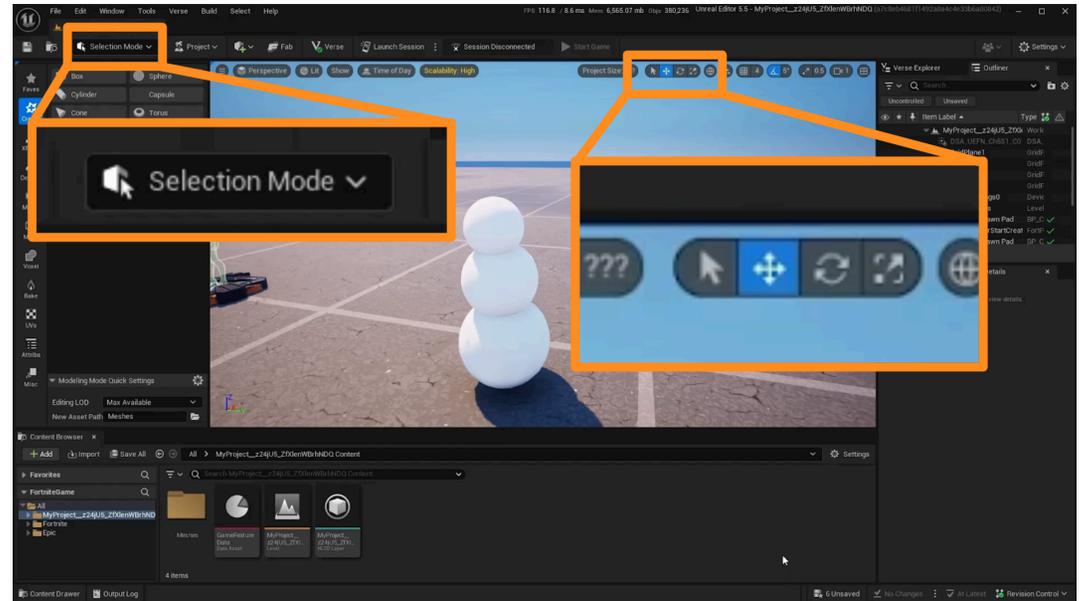
Once you find the material you’d like to use, click **“Accept”** at the bottom of the screen to create your shape with the selected material.



CHANGE EACH SHAPE'S LOCATION, ORIENTATION, AND SIZE

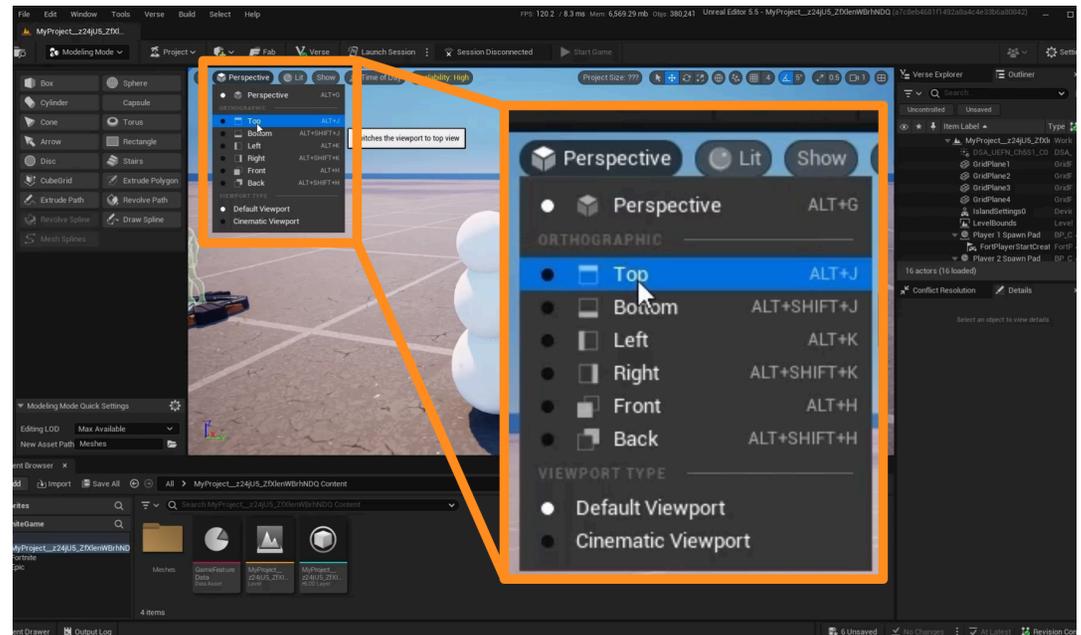
Go back into **“Selection Mode”** from the dropdown on the top menu bar to change the location, orientation, and size of your shape using the **Transform gizmos** (Move, Rotate, and Scale).

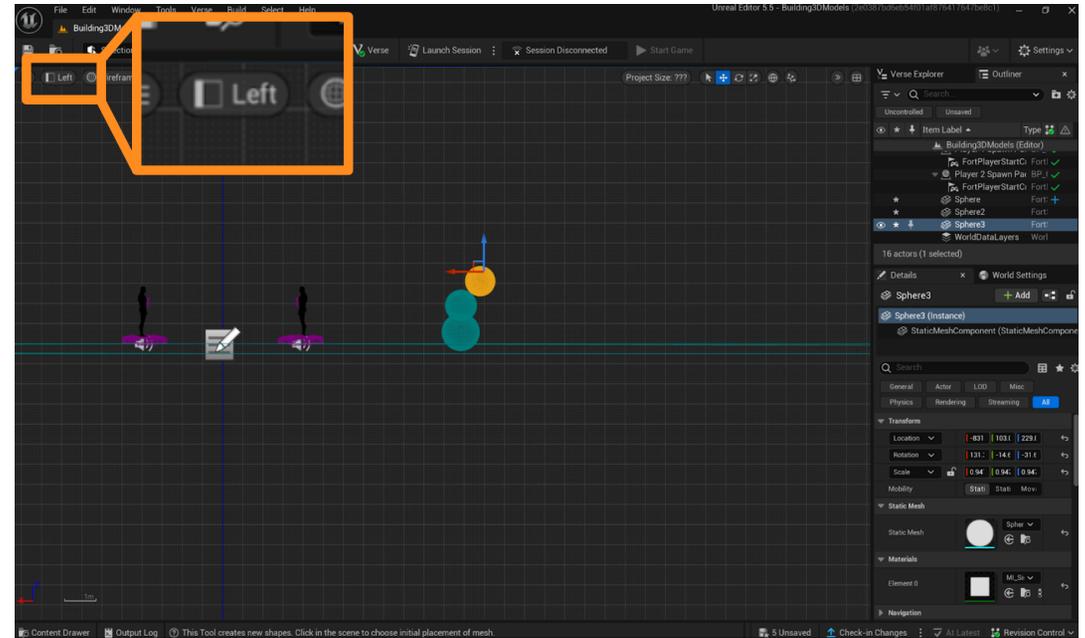
Once you are satisfied, add more shapes and materials until you have the basis of your model.



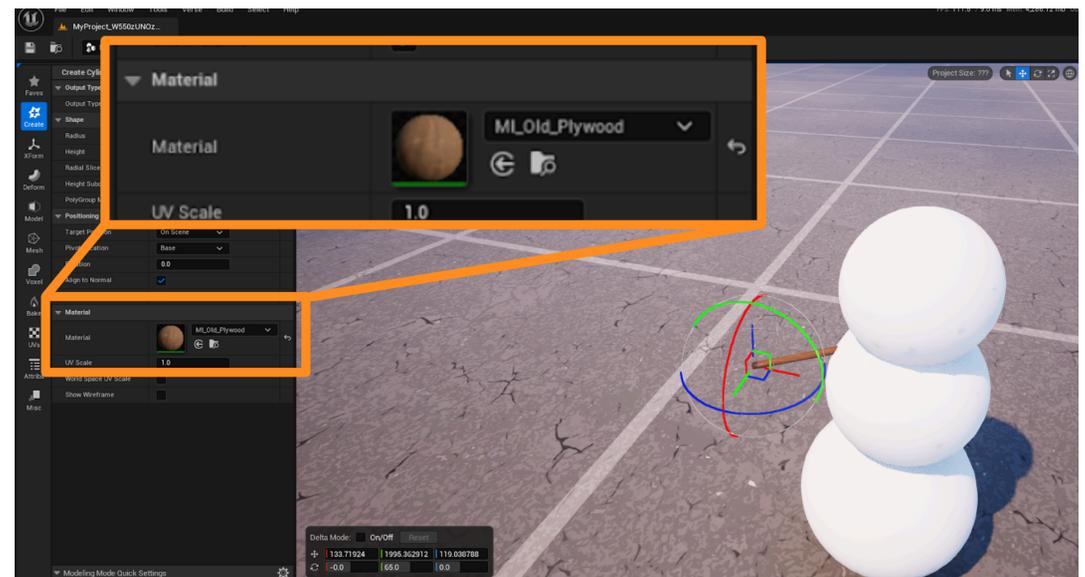
You may wish to use an **Orthographic View** to position the components of your model more precisely. Orthographic views allow you to see your model in 2D from different perspectives.

Change the view in your Viewport by clicking the **“Perspective”** button on the top-left and select from any of the options.





For example, in making our snowman, the “Top” and “Left” orthographic views allow us to see that our snowballs are not positioned on top of each other, even though they appear to be lined up when viewing them head-on. Use the Move gizmo in your selected orthographic view to move the components of your model as you wish.



To add additional parts to your model, select different shapes and materials using the same procedures described above.

For our snowman, we'd like to add arms. We can do this by using several cylinders of different sizes and applying a “wood” material.

DUPLICATE AND GROUP SHAPES

You can duplicate any shape instead of recreating it from scratch. For example, we wanted to duplicate our snowman's arm and fingers.

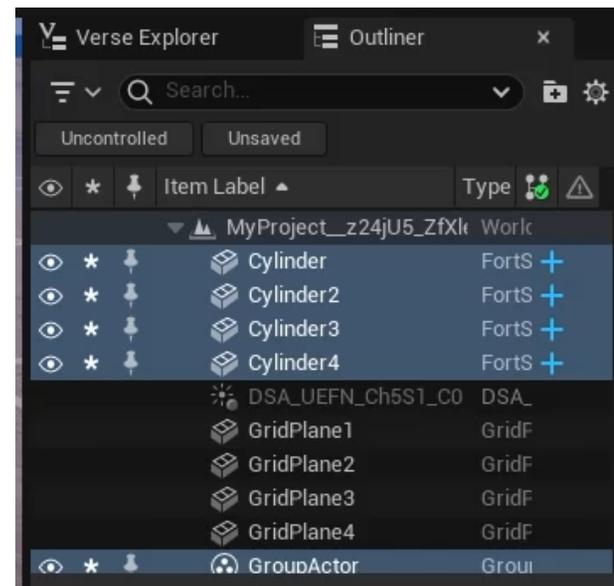
To do this, make sure you are in "Selection Mode". Hold the **CTRL** key and click parts of the arm/fingers until all of them are highlighted in orange. Next, hold down the **ALT** key and use the handle on the Move gizmo to drag a copy of the arm to a new location.



If you want to move a selection of shapes together as a single component, you can "Group" them.

Select the shapes you want to group by holding **CTRL** and clicking on each one. Then press **CTRL+G** to create a group. Now you can select your group from the **Outliner** on the right side of your screen, or click on any of the assets in the group to manipulate the group together.

If you'd like to remove your shapes from a group to be able to select them individually, select the group and press **CTRL+SHIFT+G** to ungroup.



By grouping the multiple shapes in the snowman's arm, you can move all the shapes together, instead of one-by-one. If you click on any part of the arm, the whole group will automatically be selected.

Add other details to your model by continuing to add and manipulate shapes with different materials. For our snowman, we'll use the same procedures as above to add a hat, eyes, a mouth, nose, and buttons.



Self Check

Could you create your own model by starting with simple shapes and changing their materials, location, orientation, and size to appear as you wanted?

Step 2: Add additional details

Preview

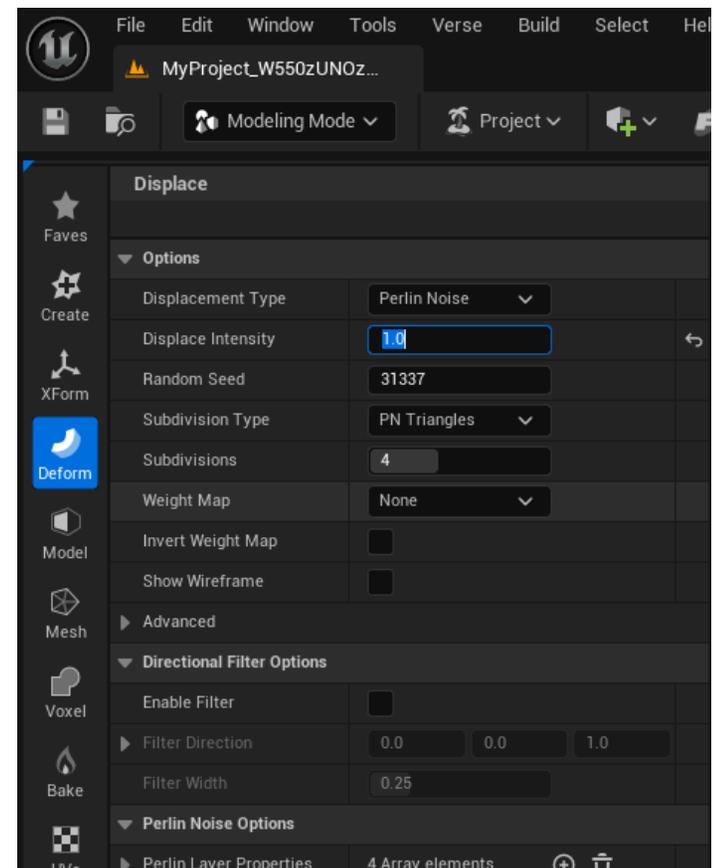
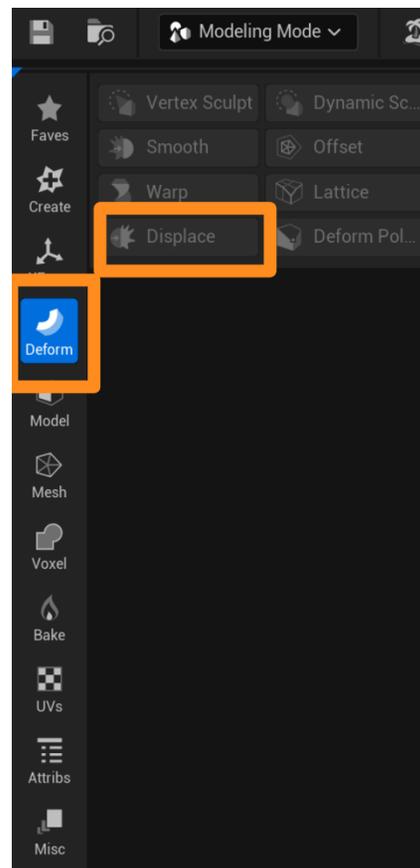
Adding more details to your shapes will improve the look of your model and make it appear more interesting. Surface details (bumps, scratches, irregularities, etc.) or additional edits can be added to your shapes using Modeling Mode in UEFN.

Experiment

ADD TEXTURES TO SHAPES

To add some texture detail to the materials you've applied to your shapes, select one of your shapes, go to "Modeling Mode," and access the "Deform" option.

Experiment with the different ways you can manipulate the texture of each shape. For example, to add a snow-like, bumpy texture to our snowman, we can select the "Displace" option, and set the displace intensity to "1." This will give the snow on the snowman some texture



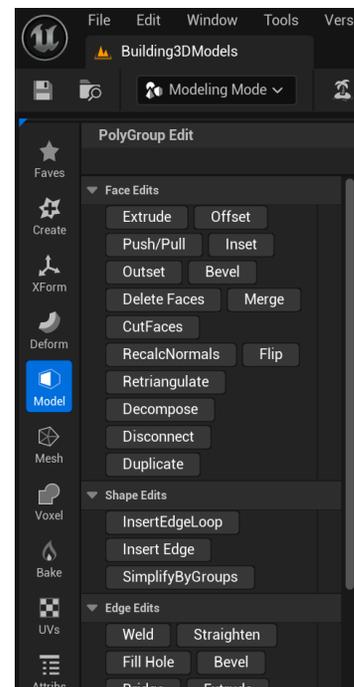
The snowman's body now has a white, bumpy texture instead of perfectly smooth spheres. This makes the snowman look a little more realistic, as if truly made of snow.



ADD ADDITIONAL DETAILS TO SHAPES

There may be times when you want to make more refined adjustments to a shape in your model. The “**Model**” option in Modeling Mode lets you make adjustments to your model with different tools.

For example, you can use the “Extrude” tool to extract a part of your shape outward, or use the “Bevel” tool to soften the sharp edges of a shape like a cube. Experiment with these features to see how they enable you to make changes to your model.



Self Check

Were you able to create a more realistic-looking model by using tools like “Displace”?

Lesson Closure

Demonstration of Learning

You’ve learned the basics of creating your own unique 3D models using the modeling tools within UEFN. Starting with basic shapes to create a more complex model is a great way to start learning 3D modeling skills. Adding different materials and textures to your models will help you make them look more interesting in a few quick steps. As you learn, you can explore the different modeling tools within UEFN to help you create additional 3D assets.

Exploration Opportunities

If you’re interested in learning more about “Modeling Mode” in UEFN, you can find detailed explanations and tutorials of all the tools in [Epic Games’ UEFN documentation](#). [The Dev Community](#) of Epic Games is also a great place to find additional resources or ask any questions you might have during your 3D creation journey in UEFN. You can start by checking out the following tutorials on the Dev Community to learn more about UEFN and start building your own games and other 3D experiences.

[Your First Hour in UEFN](#)
[Build a Game in UEFN](#)

To add more 3D assets to your island experience in UEFN, you can also utilize online libraries, or use 3D scanning tools to create photorealistic models of real-world objects. The following lessons can help you combine multiple resources to add a diverse range of assets to your 3D experience:

[Pre-Made Asset Libraries Learning Guide](#)
[Pre-Made Assets in UEFN Learning Guide](#)
[Create and Edit Photorealistic Models Learning Guide](#)