

An introduction to interactive worlds in UEFN

By Michael D'Alton

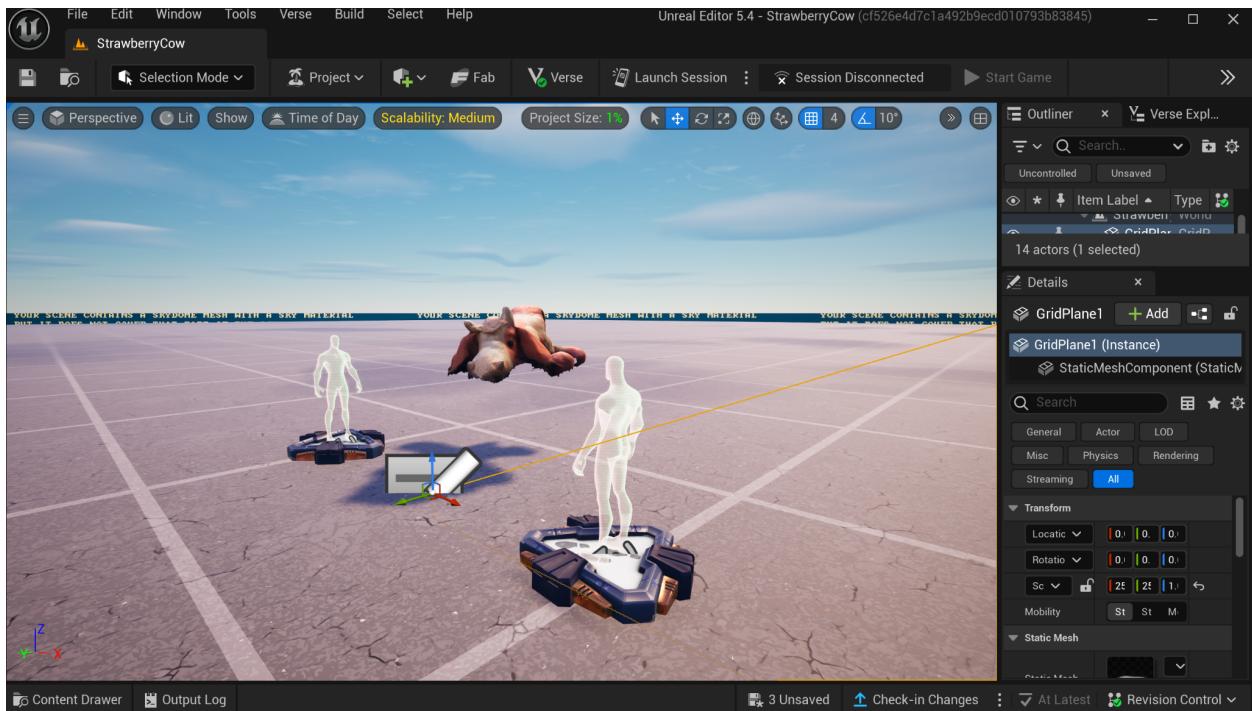
Goal:

Introduce the cinematics feature in UEFN and after this short lesson they should be able to record an object moving, connect it to a button inside the game and press the button to play the cinematic they recorded. After all of this a further goal will be to encourage further learning with the cinematics feature.

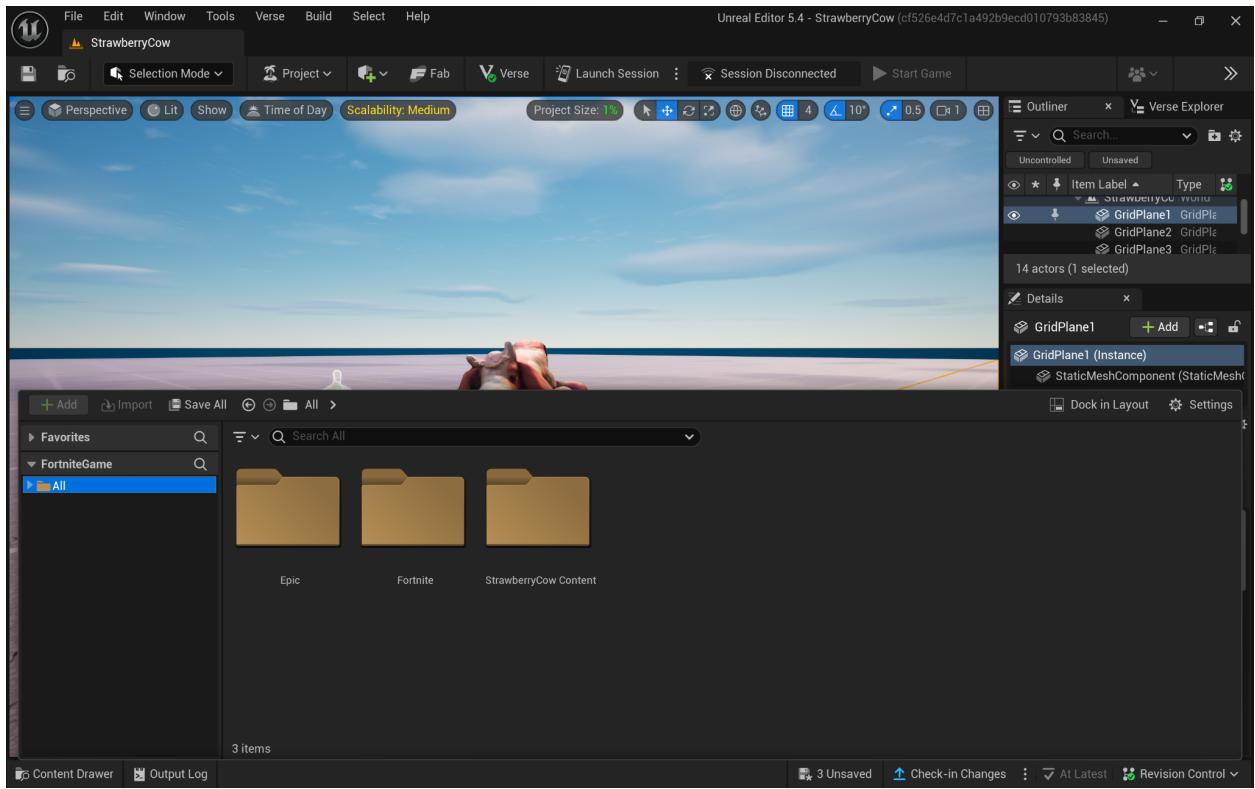
How to:

Place the desired object into the scene. I will be using the object I created following the previous microcourses.

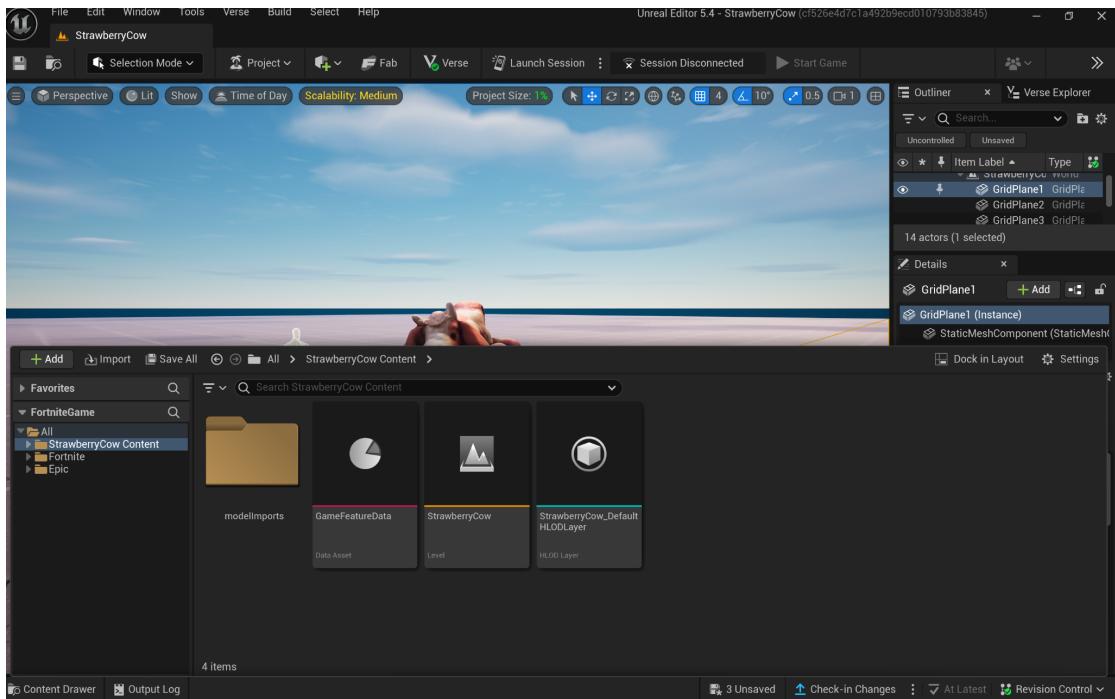
(below is a picture of my object called strawberry cow)



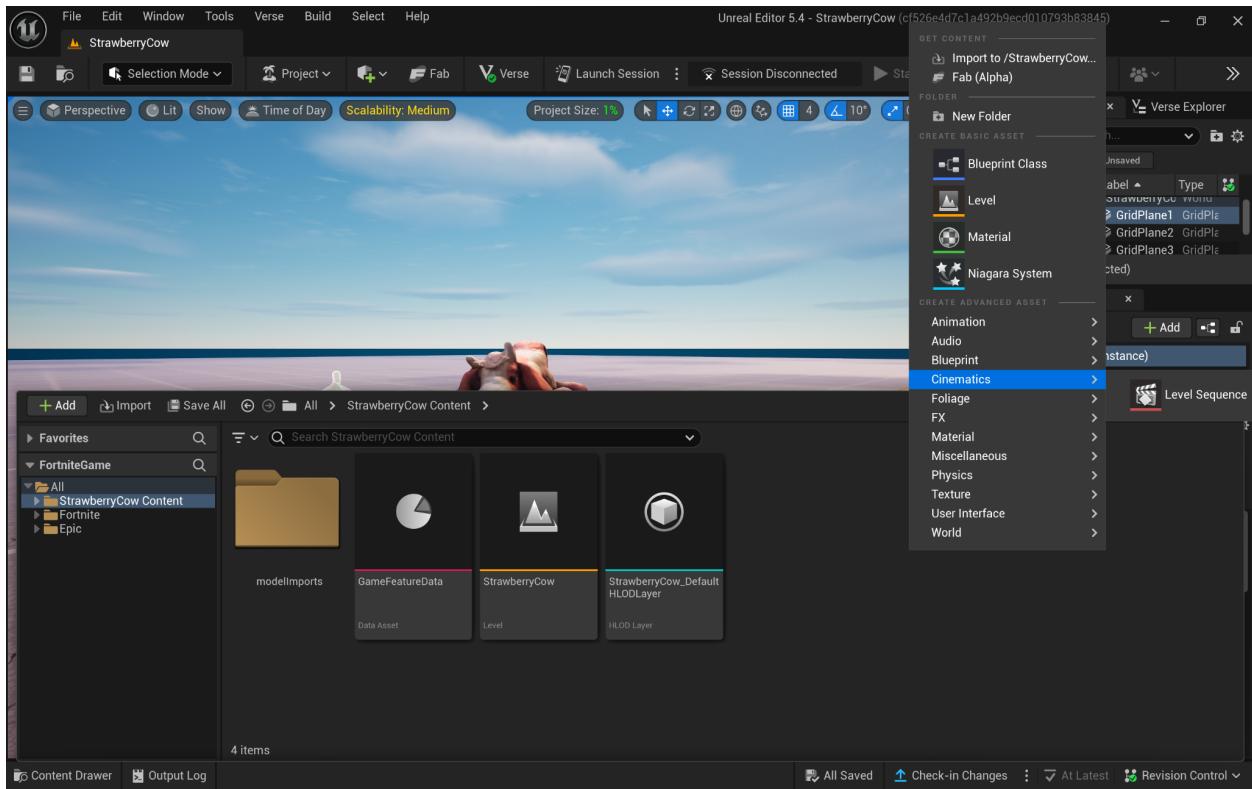
Open content drawer located in the bottom left corner of the screen.



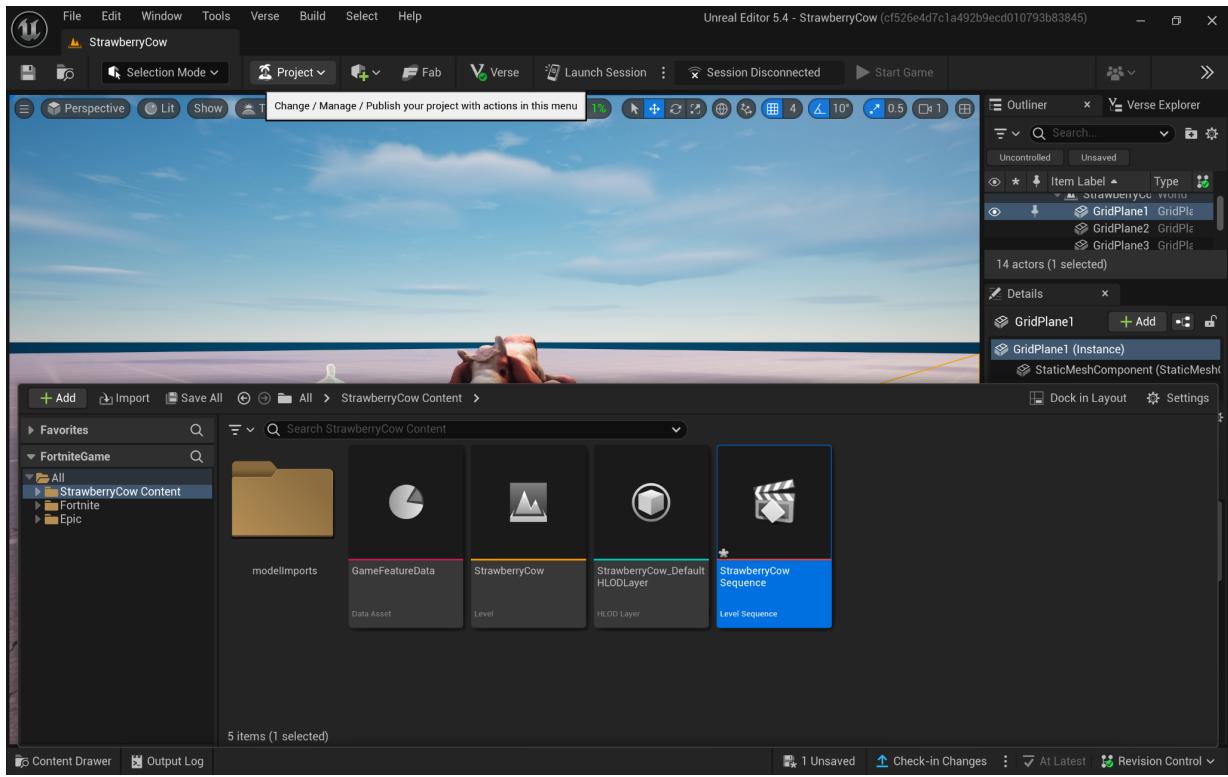
Navigate to your islands folder in the drop down menu. It should be the name you gave your island upon creation.



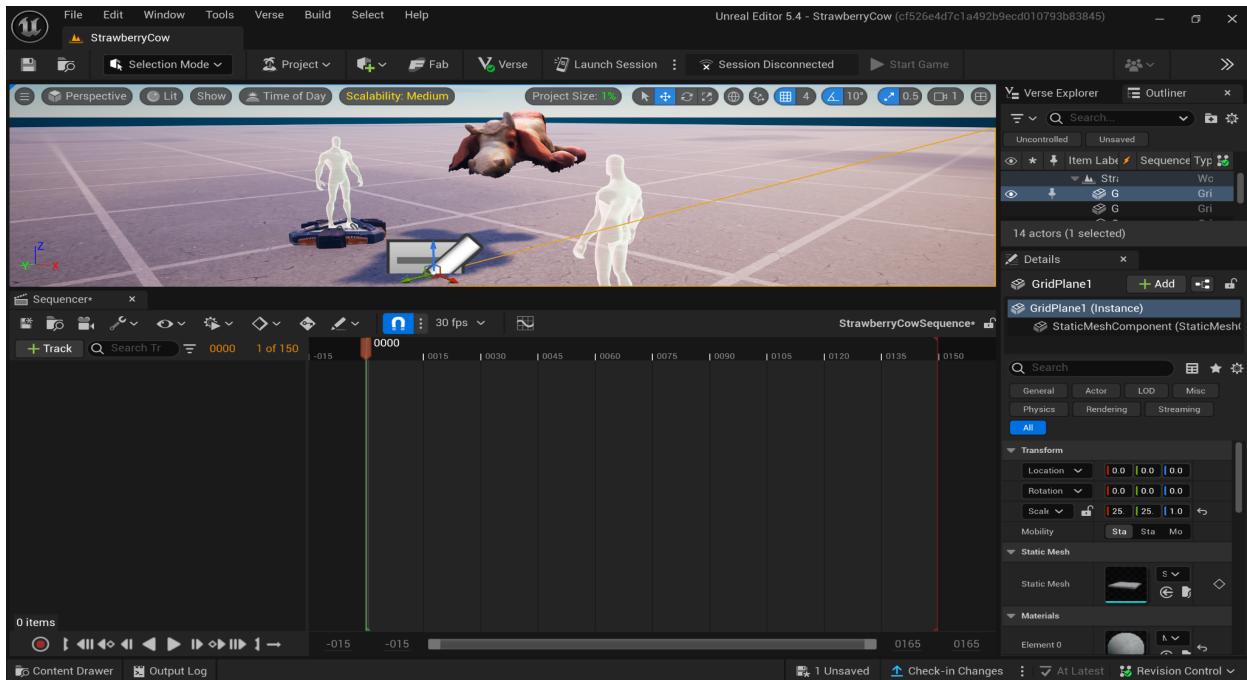
Right click on the gray area next to the content in that folder. After right clicking select the cinematics option and select level sequence to create a new sequence and name your sequence as desired.



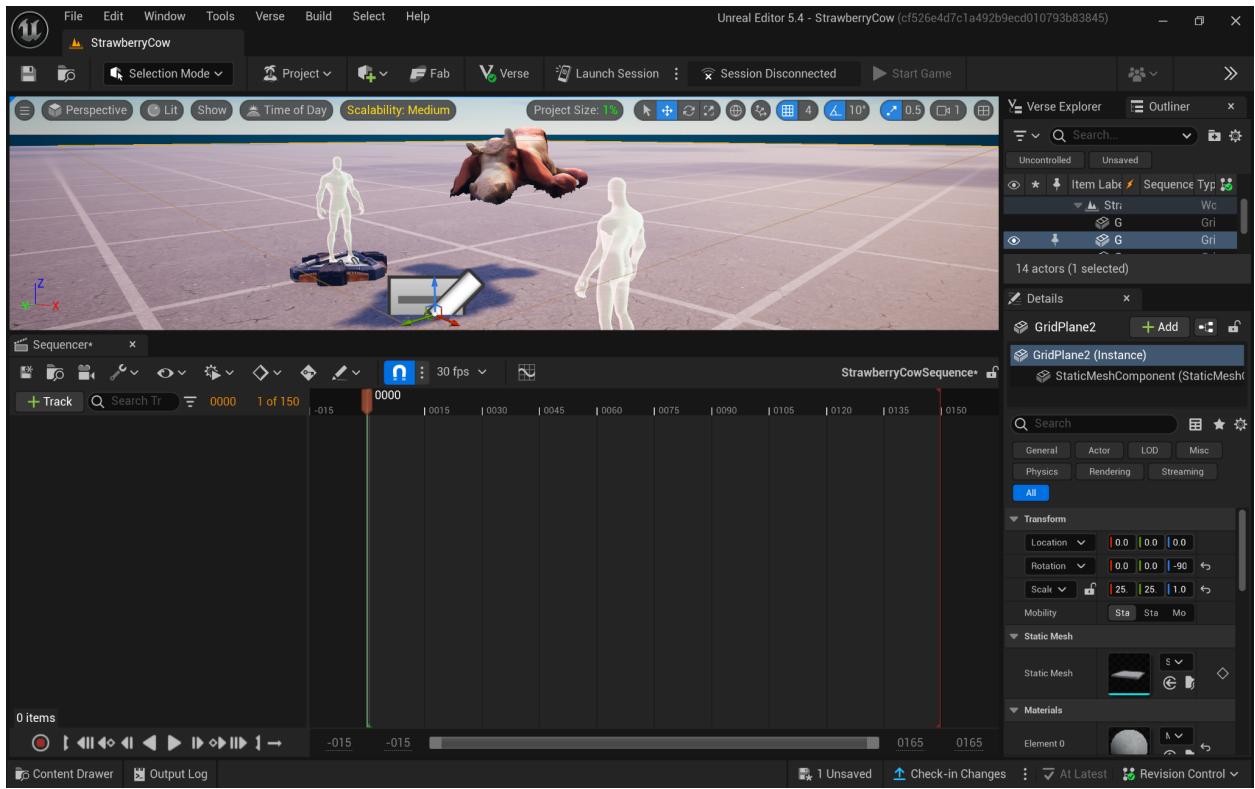
I named mine StrawberryCowSequence



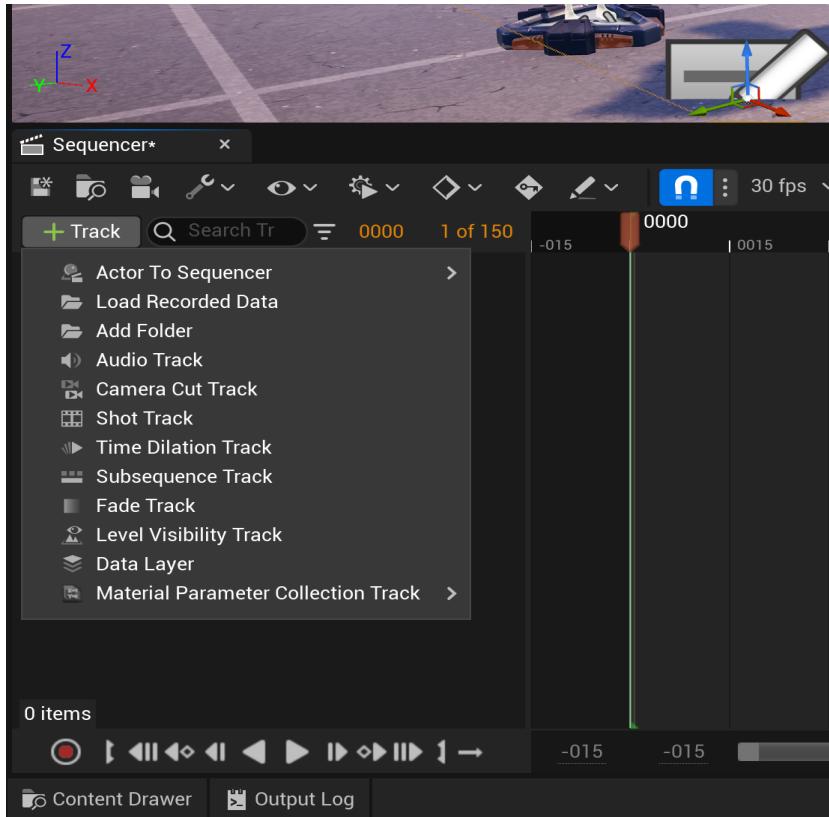
Double click on the sequence then click out of the content drawer into your scene. After clicking on the scene you should now see the following sequencer here is where we can create a cinematic with objects. You can think of a cinematic as a scripted sequence and you can move anything from objects to the camera.



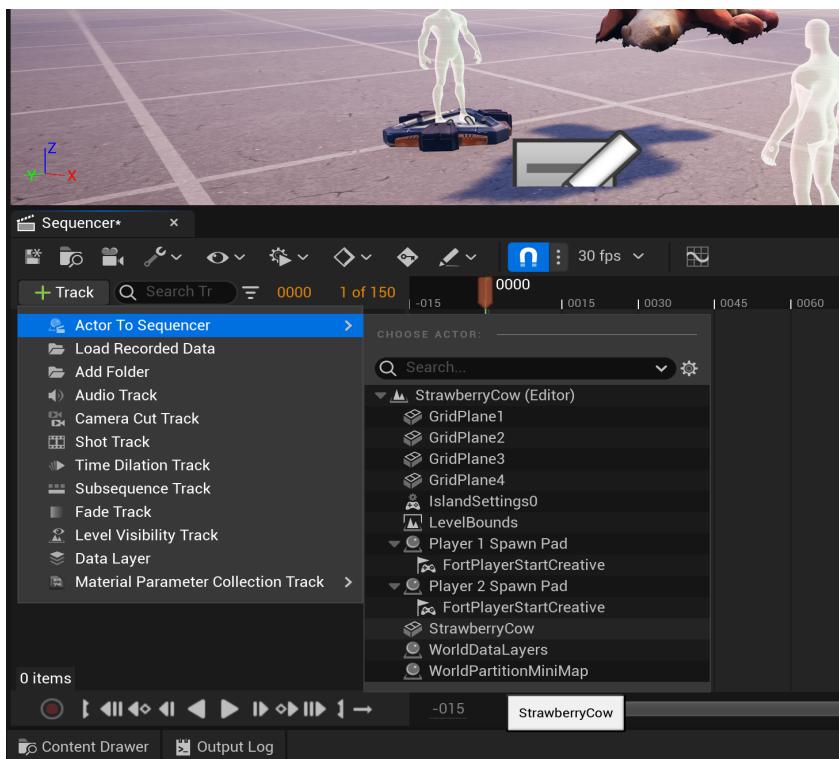
There is a timeline where you can adjust the length of the total cinematic. Here we can scrub through the cinematic and make it play by hitting the spacebar. Scrubbing through a cinematic is the same as moving through a youtube video or movie.



First in order to select an object to track in our cinematic we can click the green plus pictured below.

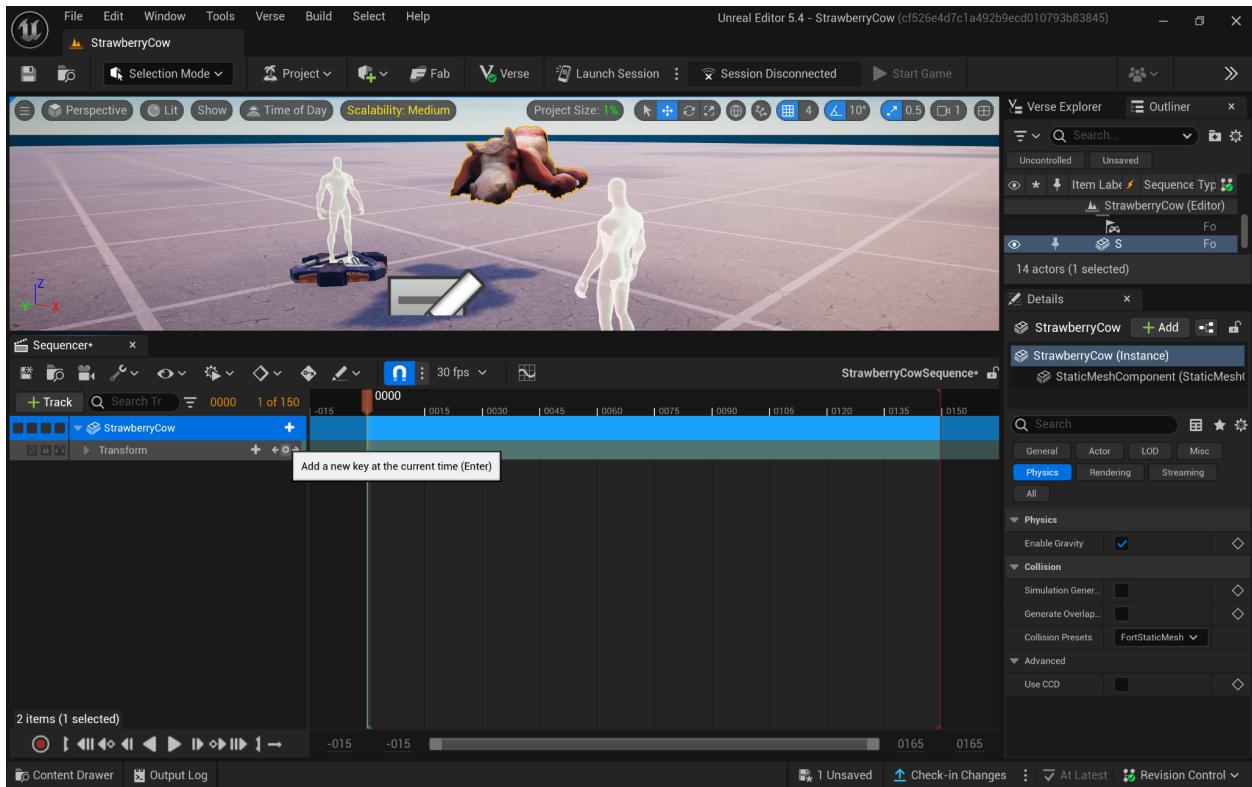


Next we need to click the button called actor to sequence and in the drop down menu find the object you desire to edit, in this case strawberry cow.



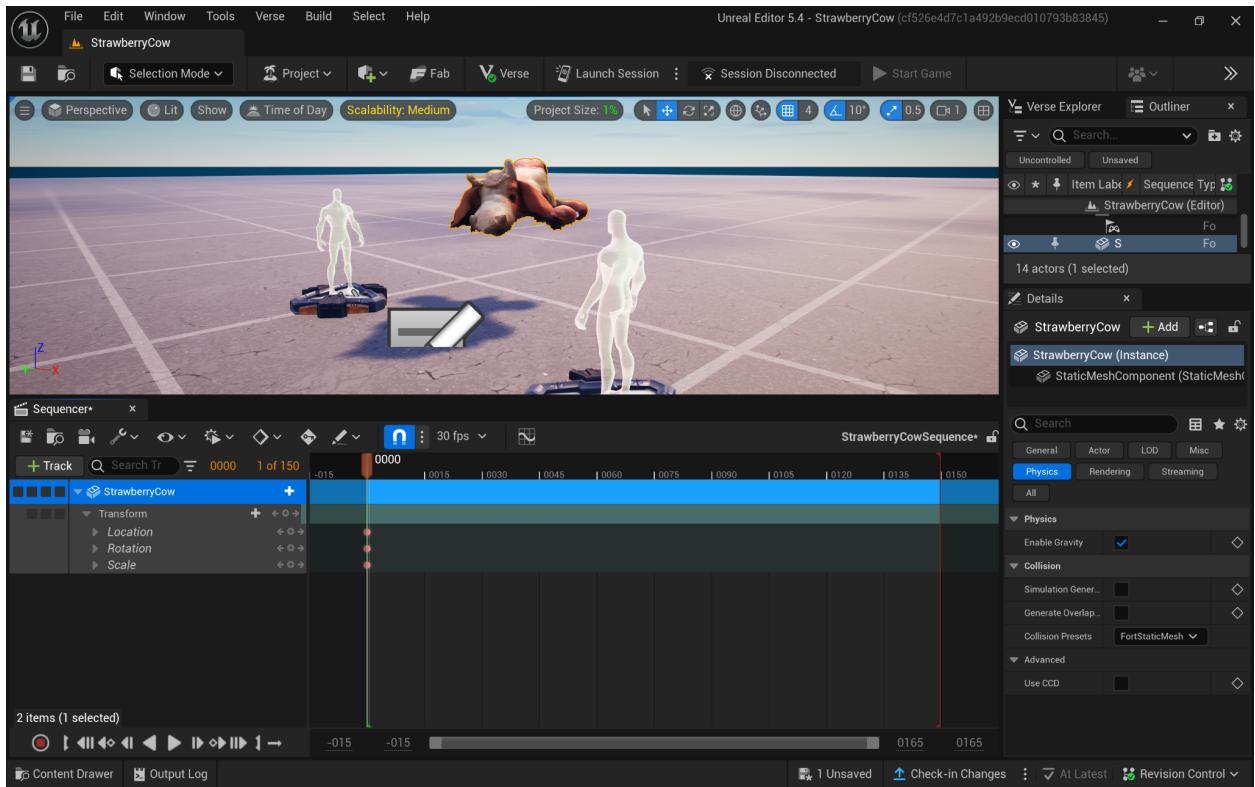
Now the object should be showing up in the sequencer. In order to move around our object we will need to create keyframes. These frames are essentially the main frames our cinematic will transition through.

If you navigate to the gray + symbol in the sequencer next to the object and select transform we can track that specific object's movement around the screen and add keyframes to that movement. A keyframe is a starting or end point for a smooth transition in an animation.

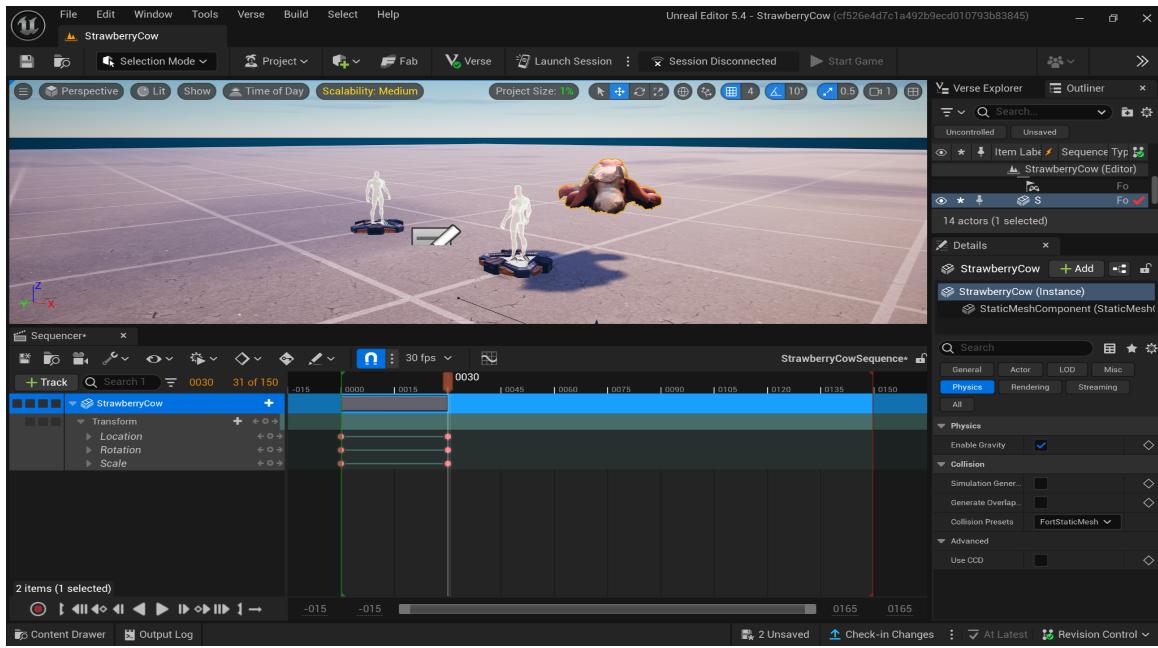


To the right of the transform button there should be a small circle with a plus inside of it and when you hover over it it says “add a new key at current time (Enter)”. So what this means is we can select the strawberry cow, move it by clicking and dragging it then press enter to create a new key frame.

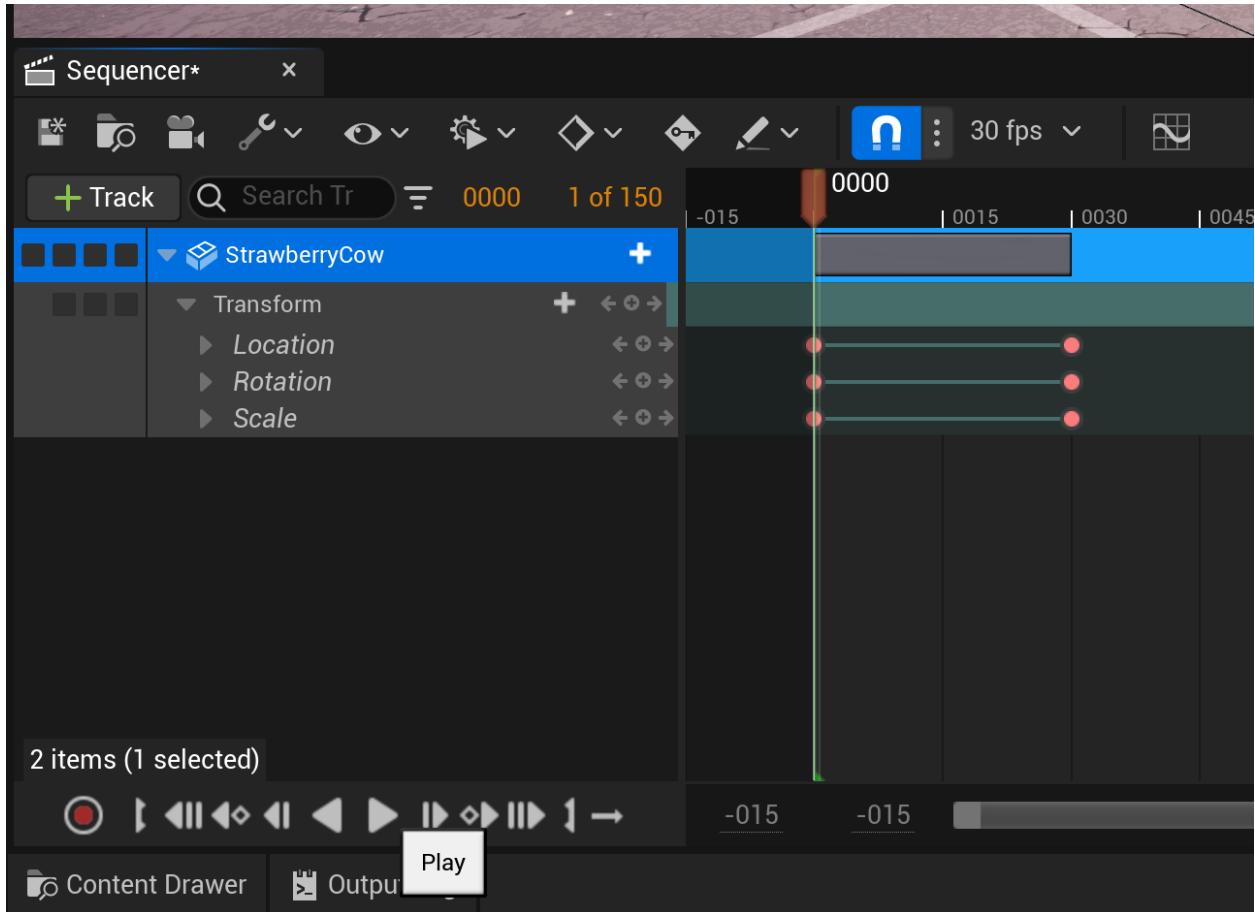
First click on the object in your scene and press enter this will create a new starting key frame in the sequencer pictured below. That keyframe should look like the picture below and be placed at 0000. If you do not see all three red dots click on the drop down arrow to the left of transform and you will see the same timeline as below.



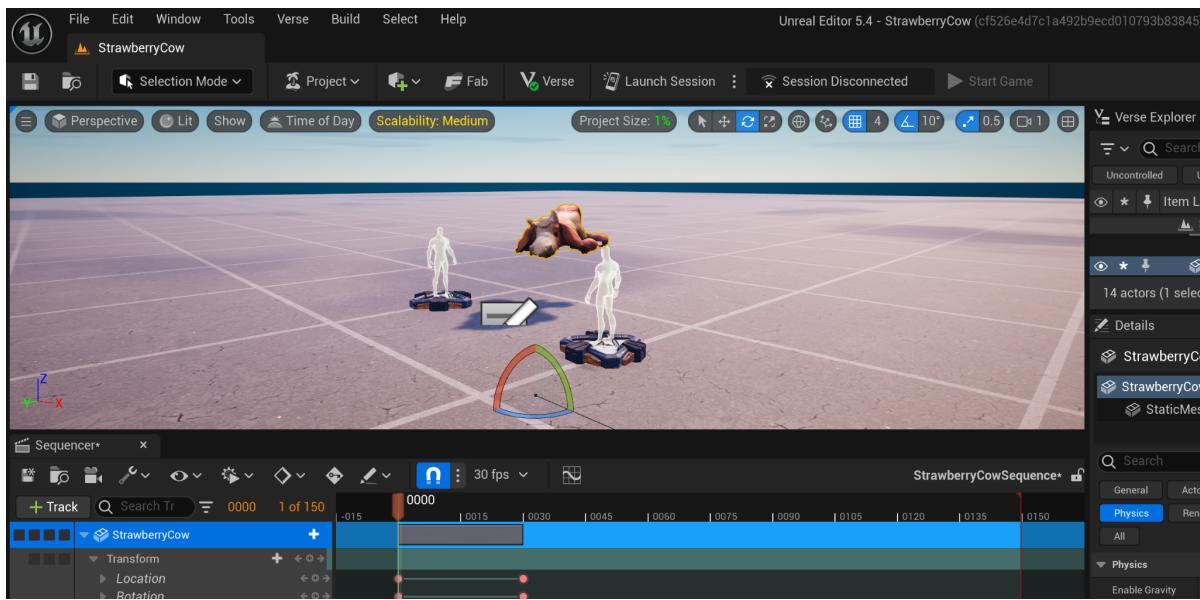
Now select the red arrow in the sequencer timeline and move it to the right until the number is 0030. After you have done this make sure your object is still selected by checking if it is highlighted and using the translate gizmo below your object move your object some distance. Once you have placed it in your desired location press enter again for a new keyframe. Here you might notice if you moved your object a lot more than the object simply moved from the start point of keyframe1 to the endpoint of keyframe2. What this means is that objects do not follow your exact movement but instead take the shortest path between keyframes.



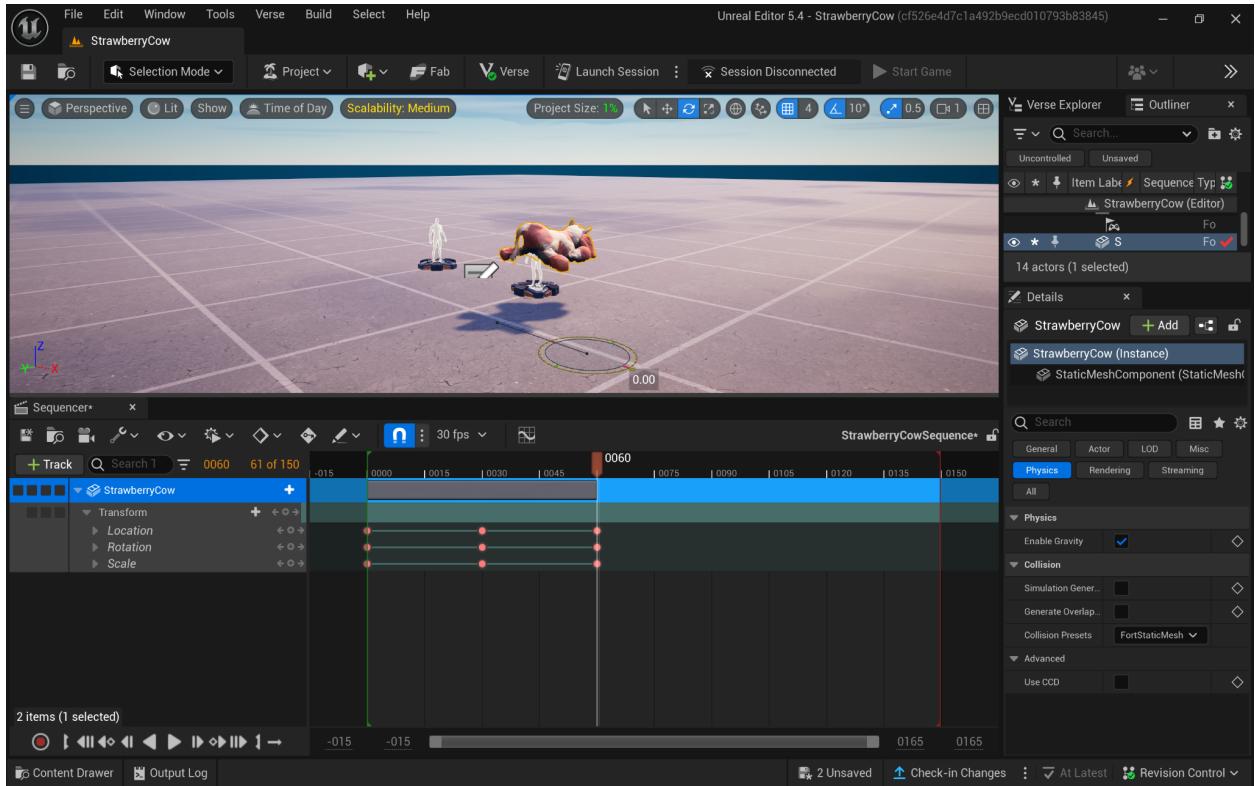
Now let's play this short animation. Move the red arrow inside the sequencer back to 0000 which should be the first keyframe. To play the animation either hit the spacebar or the play button in the bottom left of the screen. You should now see the object move smoothly across the screen.



Next let's try adding even more keyframes. In the screen with your object press the E key then click on your object. Instead of the transform gizmo you should now see a rotation gizmo.

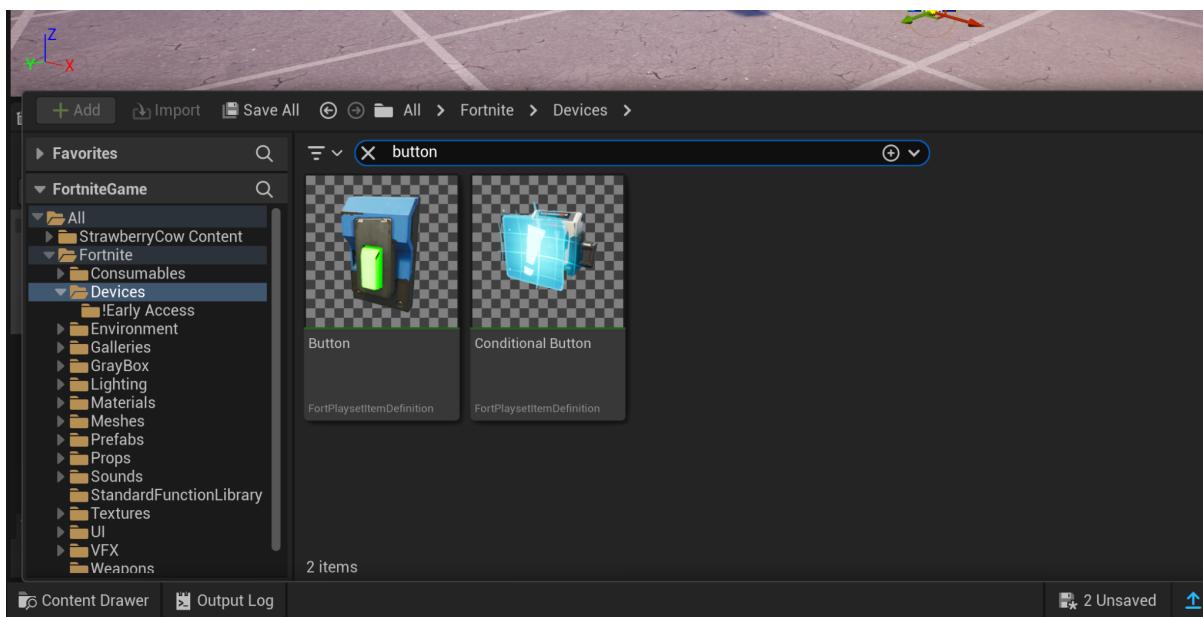
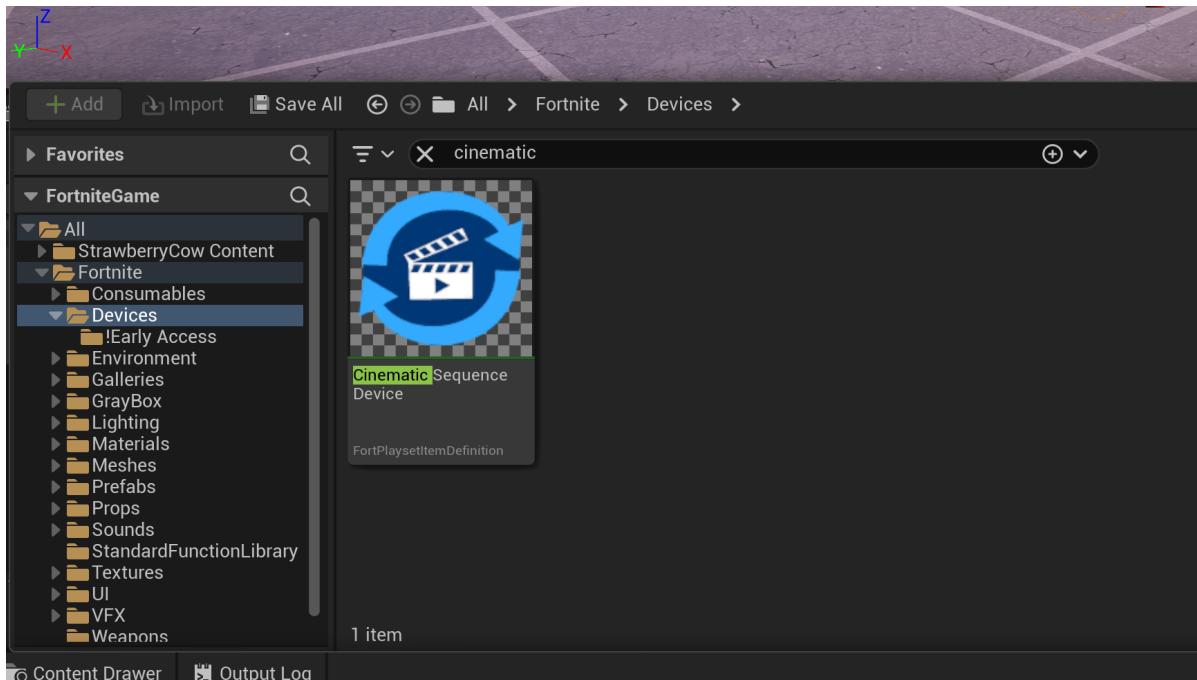


Go into the timeline of the sequencer and move the red arrow until it says 0060. Then make sure your object is highlighted and using the rotate gizmo rotate your object. After rotating your object a desired amount hit the enter key to create another key frame.

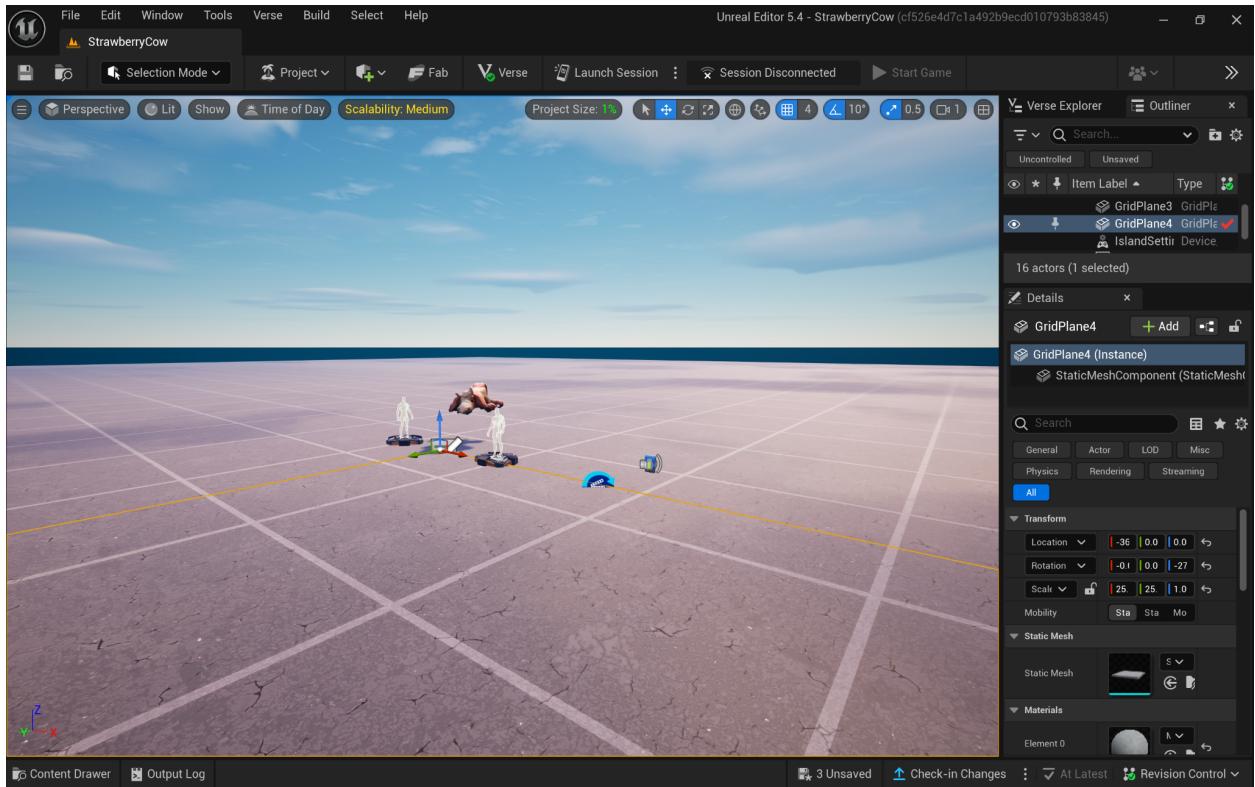


Drag the red arrow inside the sequencer back to 0000 and hit the play button again. You should see your object move then rotate. Go back into your scene and hit W in order to change modes to move objects around before the next step. You can also close the sequencer tab at this time.

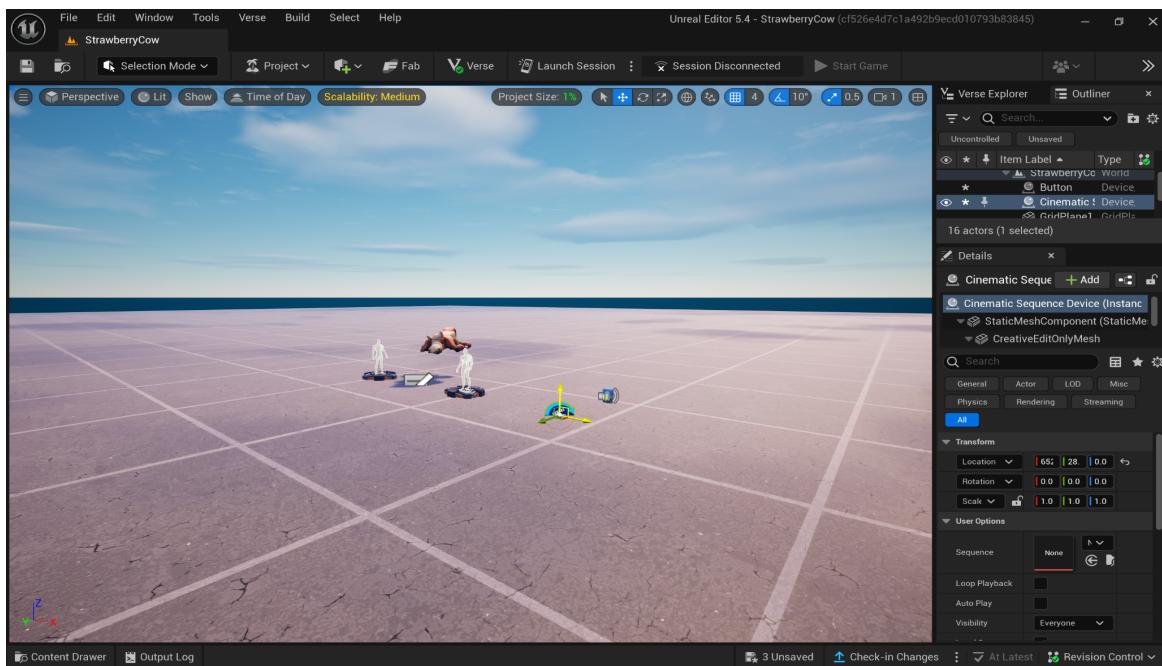
Now let's make this playable inside of fortnite. Navigate back into the content drawer then to the fortnite folder then to devices. Here we need two more objects to allow us to interact with our cinematic in game. First find the cinematic sequence device and click and drag it into the scene. Next search for a button click and drag that into the scene as well. do not use the conditional button.



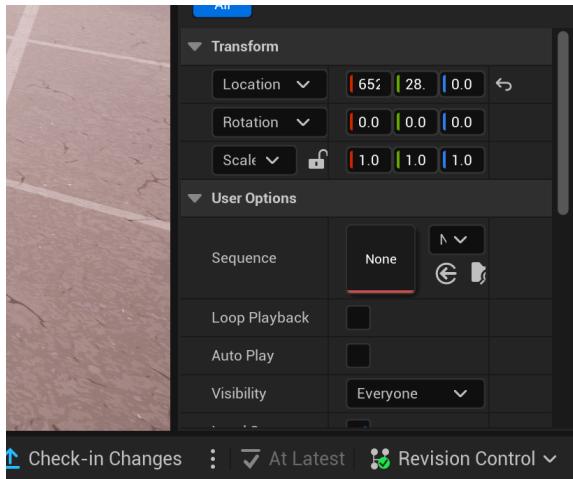
Place both objects in your scene near your object above the ground in a position you can reach inside of fortnite easily.



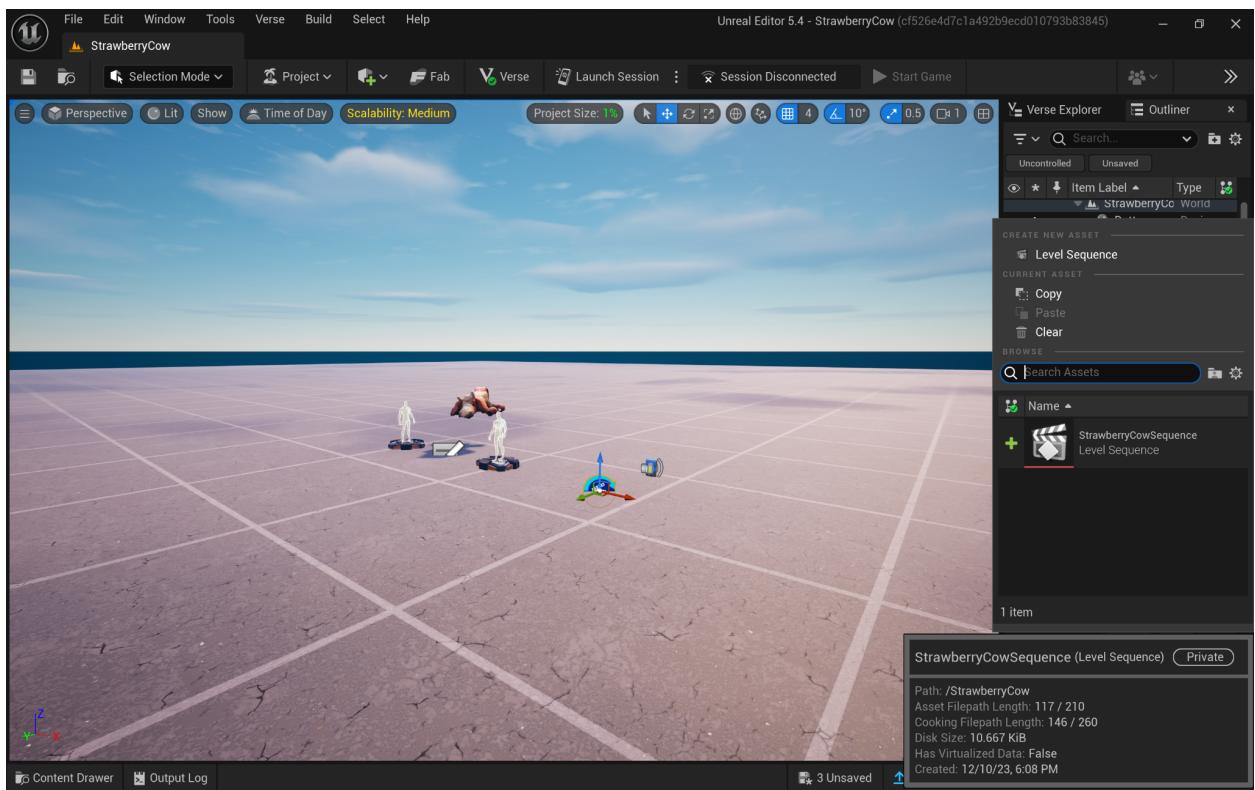
Now click on the cinematic sequencer and on the right side of the screen you should see the following outliner.



Navigate to the user options area and find where it says sequence click on the small box with a dropdown arrow that says none.



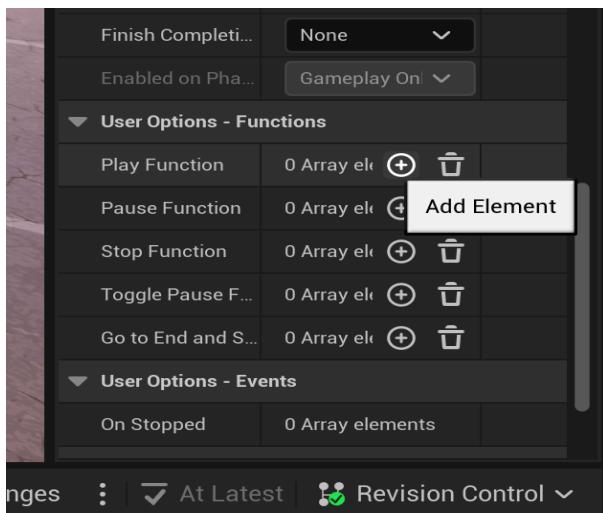
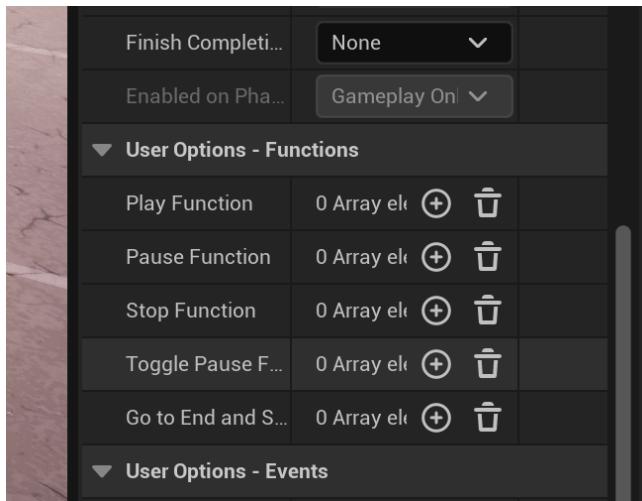
Here you will see a menu pop up and we can select a sequence. There should only be one click that sequence to attach it to this device. What this does is attach the sequence we just made to the sequence device we just placed.



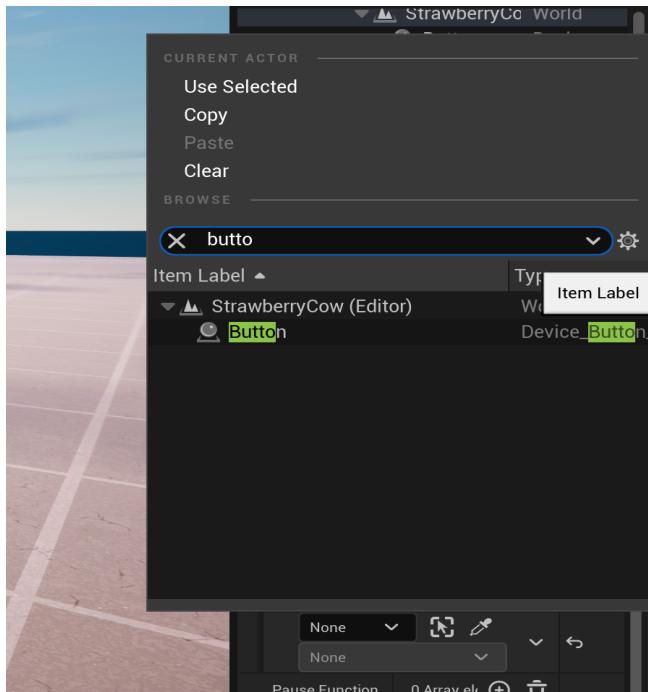
Optionally click on the check box that says loop playback so your animation plays on repeat in game. This should be directly below the sequence box that said none.

Next we want the button to activate this sequence so scroll down until you see the User options - Functions area

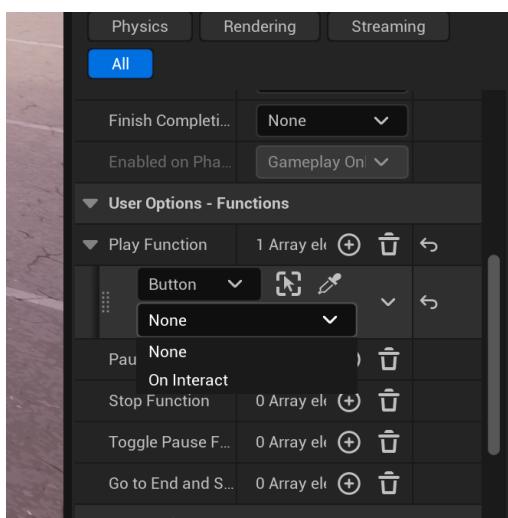
In this area find the play function and click the plus sign that says add element when hovering over it.



Now two boxes that say None should appear. In the first one that is not grayed out click on it and find the button object we placed into the scene earlier.

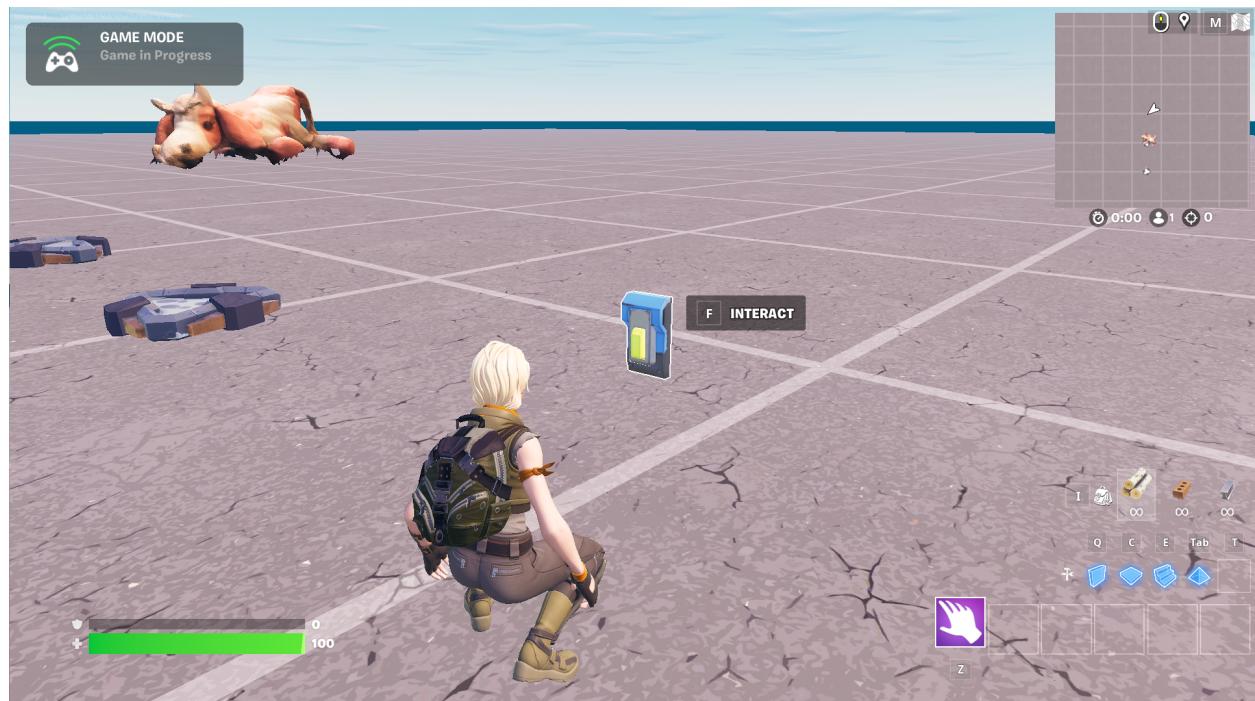
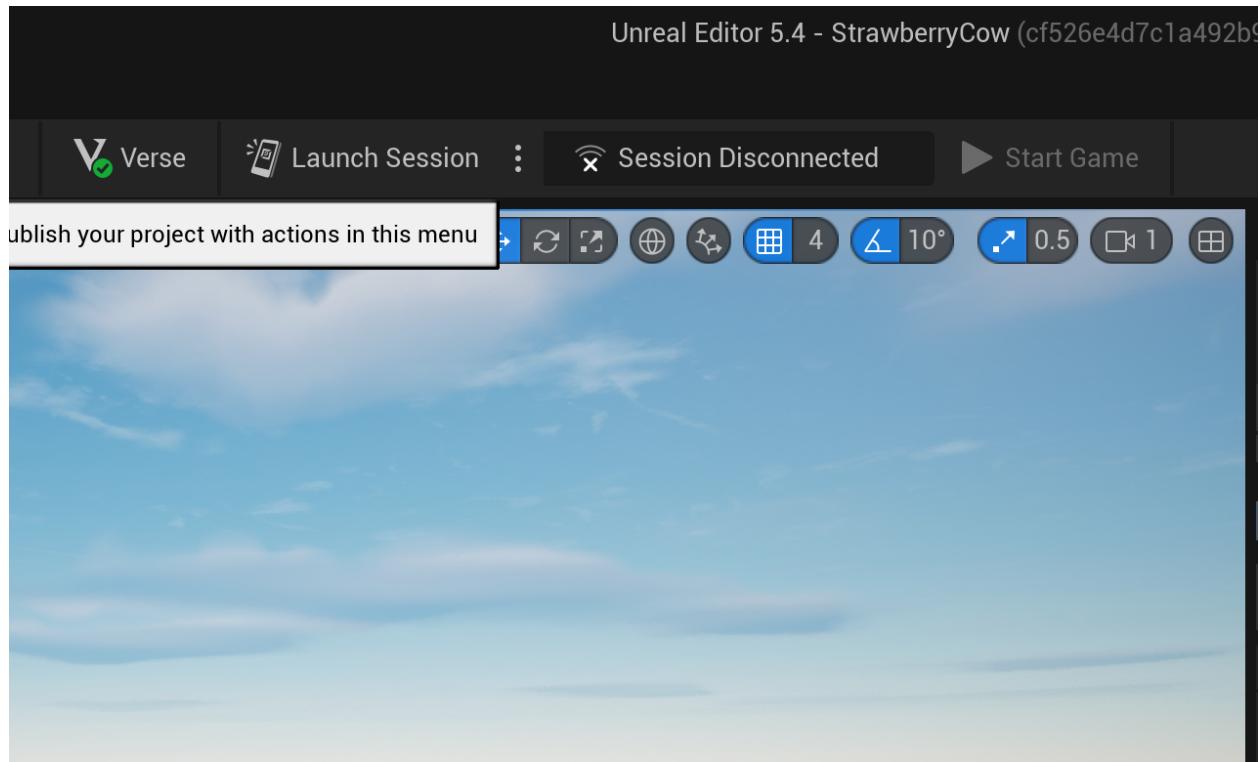


Now the other grayed out box should not be grayed out anymore click that box and select on interact.



Save your work by hitting **ctrl + s** on your keyboard.

Now we have to test it by going into the game. So at the top of the screen click the launch session button. After a few minutes depending on the computer you will be launched into the fortnite island with your object and a button. Walk to your button and press E to interact with it and your cinematic should play. In game you will only see the button, and your object but not the cinematic sequence device.



What more can be done with cinematics:

- Camera work with the cine camera
- Rig rail to move your camera in a fixed path, think a camera dolly.
- Track an element in your scene with the camera as it moves around
- Add animations to actors in your scene
- Essentially cinematics allow you to create your own cutscene like a boss fight in a video game, or a scene in a movie. It's a very powerful tool.