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### A8 Destruction Breakdown

For this assignment I decided on doing a breaking poison potion bottle. The use case idea is in a game a player throws a poison splash potion on the ground and it shatters releasing the poison. I found a potion bottle fbx that had a hollow section so I used that as my object to fracture. I then added a tube shaped fluid object inside the bottle that follows the same velocity so it splashes out when the bottle breaks. I then added a smoke explosion SimpleFX to give visual flavor that makes it clear this is a noxious effect. Finally, I added a particle sim that uses a torus shaped axis force to create a small dome then ring around the explosion area to indicate the area of effect of the item.

For the destruction I used a YouTube tutorial that did a simple fracture of the rubber toy. This involved using scatter to create the fracture points, and something this tutorial did that I made sure to include was separating out the interior parts of the object so that the fractures were not all surface level. I could not find a model of just a hollow glass bottle, so I used one that had a little bit of solid liquid on the inside which is why it is chunkier than it should be if it was just glass. For the fluid sim that went inside I used a tube shaped fluid. At first I was struggling to get this to work in tandem but then I found the velocity tools and I actually ended up merging the fluid in with the fracture sim so that the fluid would interact with the fracturing components instead of just being on its own. This gave an effect that I really liked. I also wanted there to be a big poison splatter on the ground so I went for a more viscous fluid, and added slip on collision so the poison water would spread more. The smoke plume was pretty simple, I just deactivated fire on an explosion SimpleFX and added some disturbance and turbulence. I also played around with the density and voxel size to get a plume with the right thickness. Finally the particle sim took some time as I was trying to figure out what I wanted. I was not sure if I wanted a big shockwave, but decided instead on the circle area of effect because I think this would be most expected in a fantasy game setting which is what I was going for. I used the torus shape for axis force and played with lift speed and suction speed until I got the dome plus circle.