

## Part 1:

I want to make a smoke simulation that reacts to wind and other objects. The wind reaction shouldn't be too difficult as it would only be reacting to the sound of the wind and not a physical object. The particles will move in a certain direction depending on which side the sound is coming from. Making the smoke react to "moving" wind would be a bit of a challenge. I would probably attach the sound object on another object that is orbiting the smoke while facing it. The particles will keep track of where the sound is coming from (The location of the object it's attached to) and move away from it.



The particles will have colliders so they will react to other objects in their way. They need to act like smoke though, so they also need to take the shape of the object and spread to other areas. This would probably need to be done in a cs script to manage the rigid bodies and detect other objects in the scene. A trigger would want to make them move in another direction to fill the space.



As for the actual smoke, I will use a particle system and a shader along with a noise filter to create an organic looking smoke system. A custom texture for the particles would be necessary to make the smoke look even more natural.

## Part 2:

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